

In accordance with Commission policy, subject matter listed above, not disposed of at the scheduled meeting, may be carried over to the agenda of the following meeting.

CONTACT PERSON FOR MORE INFORMATION: Donna R. Koehnke, Secretary, (202) 205-2000.

Issued: June 23, 1994.

Donna R. Koehnke,
Secretary.

[FR Doc. 94-16123 Filed 6-28-94; 5:04 pm]

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NATIONAL FOUNDATION ON THE ARTS AND THE HUMANITIES

INSTITUTE OF MUSEUM SERVICES

SUMMARY: This notice sets forth the agenda of a forthcoming meeting of the National Museum Services Board. This notice also describes the functions of the Board. Notice of this meeting is required under the Government through the Sunshine Act (Public Law 94-409) and regulations of the Institute of Museum Services, 45 CFR 1180.84.

TIME/DATE: 9:00 a.m. to 3 p.m.—Friday—July 22, 1994.

STATUS: Open.

ADDRESS: Nancy Hanks Center at the Old Post Office Pavilion, 1100 Pennsylvania Avenue, NW., Room 527, Washington, DC 20506, 202/606-8536.

FOR FURTHER INFORMATION CONTACT: Elsa Mezvinsky, Special Assistant to the Director, Institute of Museum Services, 1100 Pennsylvania Avenue, NW., Room 510, Washington, DC 20506—(202) 606-8536.

SUPPLEMENTARY INFORMATION: The National Museum Services Board is established under the Museum Services Act, Title II of the Arts, Humanities, and Cultural Affairs Act of 1976, Public Law 94-462. The Board has responsibility for the general policies with respect to the powers, duties, and authorities vested in the Institute under the Museum Services Act.

The meeting of Friday, July 22, 1994 will be open to the public.

If you need special accommodations due to a disability, please contact: Institute of Museum Services, 1100 Pennsylvania Avenue, NW., Washington, DC 20506—(202) 606-8536—TDD (202) 606-8636 at least seven (7) days prior to the meeting date.

NATIONAL MUSEUM SERVICES BOARD:

July 22, 1994—Meeting Agenda

- I. NMSB Chairman's Report and Approval of Minutes from April 21, 1994 Meeting
- II. Guest Address to the Board
- III. Agency Director's Report
- IV. Agency Agenda Reports: Programs
- V. Agency Agenda Reports: Appropriations/ Reauthorization
- VI. Agency Agenda Reports: Legislative Other/Public Affairs

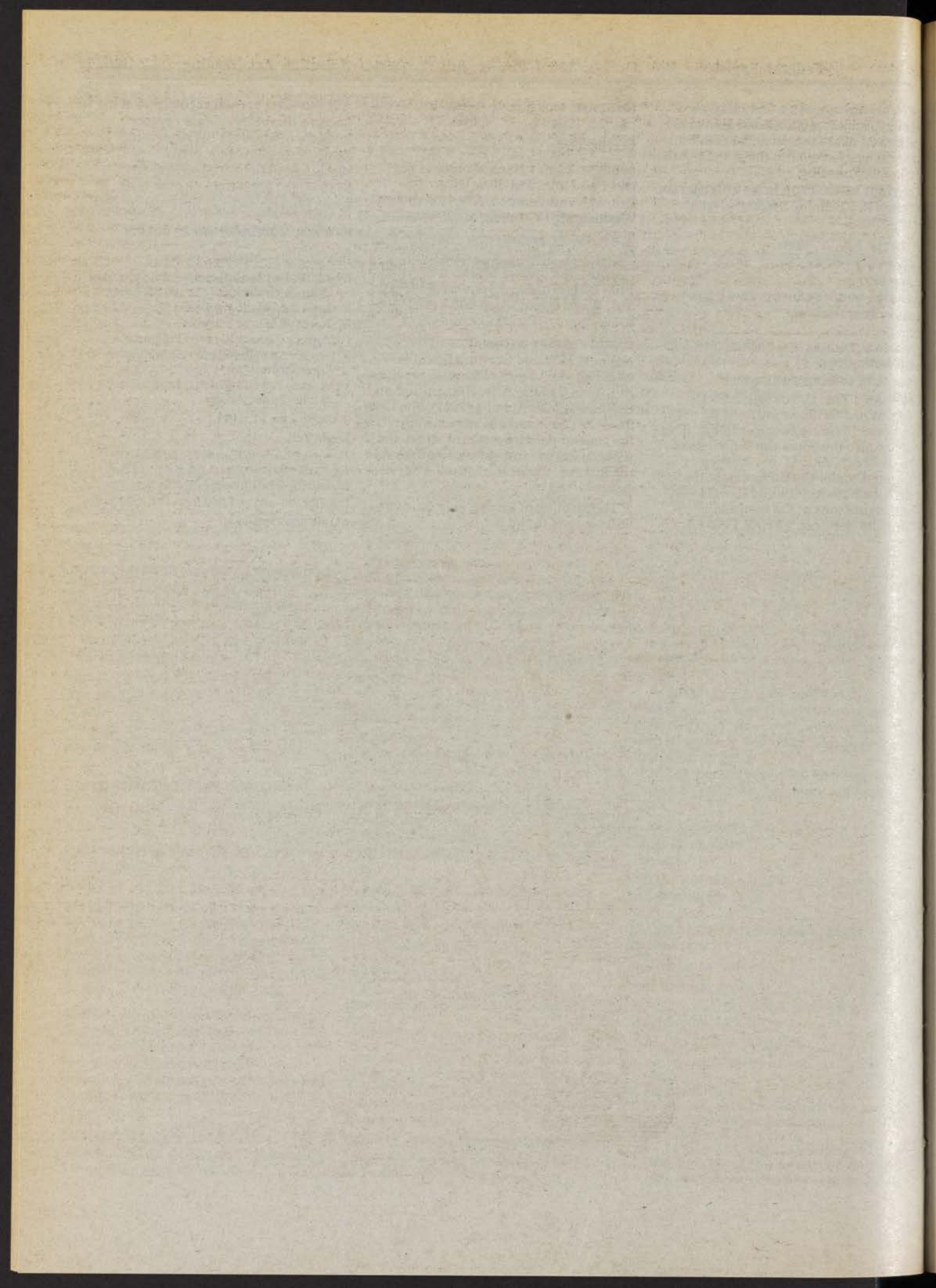
Dated: June 21, 1994.

Linda Bell,

*Director of Policy, Planning and Budget,
National Foundation on the Arts and the
Humanities, Institute of Museum Services.*

[FR Doc. 94-16122 Filed 6-28-94; 5:03 pm]

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Friday
July 1, 1994

Part II

**Federal Trade
Commission**

16 CFR Part 305

**Rule Concerning Disclosures Regarding
Energy Consumption and Water Use of
Certain Home Appliances and Other
Products Required Under the Energy
Policy Act; Final Rule**

FEDERAL TRADE COMMISSION

16 CFR Part 305

Rule Concerning Disclosures Regarding Energy Consumption and Water Use of Certain Home Appliances and Other Products Required Under the Energy Policy and Conservation Act ("Appliance Labeling Rule")

AGENCY: Federal Trade Commission.

ACTION: Final rule.

SUMMARY: The Federal Trade Commission ("Commission") announces amendments to 16 CFR Part 305, hereinafter referred to as "the Appliance Labeling Rule" or "the Rule". The Commission initiated this rulemaking to address issues raised by Commission staff and interested parties during the course of rule enforcement since 1980. Some amendments are to the format of the required EnergyGuide labels. Other amendments will require product-specific labels on furnaces; give furnace manufacturers the option of disclosing additional energy usage information on fact sheets or in an industry directory; modify the sub-categories used in connection with the ranges of comparability for certain products; require the disclosure of different energy usage descriptors for some product categories; change the specifications for label adhesion strength; and modify the Rule in certain other minor respects.

EFFECTIVE DATE: December 28, 1994.

FOR FURTHER INFORMATION CONTACT: James Mills, Attorney, 202-326-3035, Enforcement Division, FTC, Washington, D.C. 20580.

SUPPLEMENTARY INFORMATION:

I. Introduction

On March 5, 1993, the Commission published a Notice of Proposed Rulemaking ("the 1993 NPR") proposing changes to the Rule.¹ Some of the Commission's proposals in the 1993 NPR were based on comments submitted in response to an earlier Notice of Proposed Rulemaking published on June 13, 1988 ("the 1988 NPR"), proposing changes to the Rule.² The Commission initiated this rulemaking in 1988 because various interested persons had asked the Commission to consider modifications to the Rule since it became effective on May 19, 1980.³ The 1988 NPR invited

comment on a number of suggestions interested persons had proposed, including the effect of the National Appliance Energy Conservation Act ("NAECA 87")⁴ appliance efficiency standards, and a proposal to exempt from coverage certain unvented space heaters.

The 1993 NPR addressed certain issues and proposed amendments that had not been raised in the 1988 NPR, such as changes in the form and substance of the EnergyGuide labels, proposals to update the Rule in light of changes in related Department of Energy ("DOE") regulations, and changes in the energy efficiency descriptor nomenclature. The Commission also allowed comment on the other proposed amendments that had been subject to prior comment. The Commission requested in the 1993 NPR that any such additional comments be in the nature of rebuttal comments identifying analytical flaws or misunderstandings, rather than repetitions of earlier comments. Finally, in accordance with a statutory directive, the Commission invited comment on whether metric terms should be included in certain Rule provisions.

Parts III and IV, below, discuss the issues on which comments were sought, the comments the Commission received, and the responsive amendments the Commission has adopted. Part V discusses new issues raised by the most recent round of comments; Part VI addresses the comments on the use of metric terms in connection with certain of the Rule's requirements; and Parts VII and VIII discuss the requirements of the Regulatory Flexibility Act and the Paperwork Reduction Act, respectively. The amended Rule sections appear in "Text of Amendments."

II. Background

The Energy Policy and Conservation Act of 1975 ("EPCA"),⁵ as amended,

Flexibility Act regarding ways to modify the Rule. The Commission announced the completion of the review of the Rule under the Regulatory Flexibility Act (5 U.S.C. 601 *et seq.*) in the *Federal Register* on June 13, 1988, at 53 FR 22022.

¹ The National Appliance Energy Conservation Act ("NAECA 87"), Pub. L. 100-12, 101 Stat. 103 (1987).

² Pub. L. 94-163, 89 Stat. 871 (1975), as amended by the National Energy Conservation Policy Act, Pub. L. 95-619, 92 Stat. 3258, (1978), the National Appliance Energy Conservation Act, Pub. L. 100-12, 101 Stat. 103 (1987), the National Appliance Energy Conservation Amendments of 1988, Pub. L. 100-357, 102 Stat. 671 (1988), and the Energy Policy Act of 1992, Pub. L. 102-486, 106 Stat. 2776 (1992), 42 U.S.C. 6291 *et seq.* The Commission is currently considering whether to include pool heaters as covered products under the Rule. 58 FR 7852 (Feb. 9, 1993). The products in categories (14)-(18) were recently added to the list of covered products in EPCA by the Energy Policy Act of 1992. 42 U.S.C.A. 6292(a)(14)-(18) (West Supp. 1993).

requires the Commission to prescribe labeling rules for the disclosure of estimated annual energy cost or alternative energy consumption information for the following products: (1) Refrigerators, refrigerator-freezers, and freezers; (2) room air conditioners; (3) central air conditioners and heat pumps; (4) water heaters; (5) furnaces; (6) dishwashers; (7) clothes washers; (8) clothes dryers; (9) direct heating equipment; (10) kitchen ranges and ovens; (11) pool heaters; (12) television sets; (13) fluorescent lamp ballasts; (14) specified lamp products; (15) showerheads, except safety shower showerheads; (16) faucets; (17) water closets; (18) urinals; and (19) any other type of product that the Department of Energy ("DOE") classifies as a covered product. 42 U.S.C. 6292(a); 6294(a)(1), (2)(A-E). For products in categories (1) through (12) and (19), the Commission is not required to prescribe labeling rules until DOE has prescribed test procedures to measure the energy use of a particular covered product. 42 U.S.C. 6294(b)(3). Moreover, the Commission may exempt from the Rule products in categories:

(a) 1, 2, 4, 6 and 8 through 12 if it determines that labeling is not technologically or economically feasible, 42 U.S.C. 6294(a)(1); and,

(b) 3, 5 and 7 if labeling is not technologically or economically feasible or not likely to assist consumers in making purchasing decisions, 42 U.S.C. 6294(a)(2)(A).⁶

With regard to products in categories (1) through (12) and (19), EPCA states that the Commission must require the labels to disclose the estimated annual operating cost of such products, as determined by DOE test procedures, unless DOE determines that disclosure of estimated annual operating costs is not technologically feasible, or the Commission determines that such disclosure is not likely to assist consumers in making purchasing decisions or is not economically feasible. If DOE or the Commission makes these determinations, then the Commission must require disclosure of a different useful measure of energy consumption, as determined in accordance with DOE test procedures. 42 U.S.C. 6294(c).

On November 19, 1979 the Commission issued a final Rule covering seven appliance categories

The Commission amended the Rule to address products in categories (15)-(18) on October 25, 1993 (58 FR 54955) and products in category (14) on May 13, 1994 (58 FR 25176).

⁶ There is an additional exemption provision for lamps that is not pertinent to this analysis. See 42 U.S.C.A. 6294(a)(2)(C)(ii) (West Supp. 1993).

¹ 58 FR 12818. The Commission's Rule is codified at 16 CFR Part 305.

² 53 FR 22106.

³ The Commission also had received comments during the review of the Rule under the Regulatory

then covered by DOE test procedures: refrigerators and refrigerator freezers, freezers, dishwashers, water heaters, clothes washers, room air conditioners, and furnaces.⁷ The Rule subsequently was amended to cover central air conditioners and air conditioning heat pumps, fluorescent lamp ballasts, plumbing products, and lamps.⁸ For most product categories, the Rule requires that annual operating costs in dollars and related information be disclosed on labels, called EnergyGuides, and in retail sales catalogs. For three categories (room air conditioners, furnaces, and central air conditioners (including heat pumps)), in which usage cycles depend on disparate climate conditions across the U.S. and an "average" energy cost would be irrelevant to many consumers (and therefore not likely to assist in making purchasing decisions), the required disclosure is the energy efficiency rating ("EER").⁹ For room and central air conditioners, the EERs must be disclosed on labels; for furnaces, the EERs must be disclosed on fact sheets.¹⁰ Corresponding cost information must be disclosed on the label for room air conditioners, on fact sheets for furnaces, and on fact sheets or in an industry directory for central air conditioners.¹¹

⁷ 16 CFR Part 305. The Statement of Basis and Purpose ("SBP") for the Rule describes why the Commission exempted the other categories. 44 FR at 66467-69.

⁸ 52 FR 46888 (Dec. 10, 1987) (air conditioners and heat pumps); 54 FR 28031 (July 5, 1989) (lamp ballasts); pursuant to the National Appliance Energy Conservation Amendments of 1988, the Rule requires these products to bear a capital letter "E" to show that they meet the statute's minimum energy efficiency standards, rather than the information the Rule requires for other product categories); 58 FR 54955 (Oct. 25, 1993) (showerheads, faucets, water closets and urinals; water usage, rather than energy usage, must be disclosed for these products); 58 FR 25176 (May 13, 1994) (general service incandescent lamps including incandescent reflector lamps, compact fluorescent lamps, and general service fluorescent lamps).

⁹ When promulgating the test procedures, DOE, as required by EPCA, developed two measures of energy consumption for each appliance category: (1) estimated dollar cost of operation, and (2) the energy factor, a measure of the useful output of an appliance's services divided by the energy input. For climate control equipment, under the Rule, the energy factor currently must be referred to as the "EER" (energy efficiency rating). As discussed in Part IV.B.3., below, however, the Commission is amending the Rule so that the acronyms used in the DOE tests and by the industry ("SEER," "AFUE," "HSPF," etc.) instead must be used in advertising as well as on fact sheets and labels.

¹⁰ As discussed in Part IV.A.2., below, however, the Commission is amending the Rule to require labels for furnaces to disclose product-specific information and a range of energy usage for all furnaces using the same fuel as the labeled model.

¹¹ As discussed in Part IV.A.2., below, the Commission is amending the Rule to permit manufacturers of furnaces, like manufacturers of

In addition, certain point-of-sale promotional materials must disclose the availability of energy cost or energy efficiency rating information.

III. Issues Discussed in the 1993 NPR

The 1993 NPR solicited comments on two sets of issues. The first set included proposals on which the Commission had sought comment in the 1988 NPR and about which the Commission had reached tentative conclusions. The 1993 NPR summarized the comments received in response to the 1988 NPR and explained the Commission's tentative conclusions. For these proposals, listed below, the 1993 NPR solicited only limited rebuttal comments:

- (1) The effect of the implementation of NAECA 87 on the Rule;
- (2) Proposed amendments to the requirements for furnaces;
- (3) Proposed amendments to the requirements for central air conditioners;
- (4) Proposed amendments to change the sub-categories on which ranges of comparability are based for room air conditioners;
- (5) Proposed amendments to change the sub-categories on which ranges of comparability are based for certain other products;
- (6) Proposed amendments to change the energy usage descriptor for several products from dollars to an alternate descriptor;
- (7) Proposed changes to the label adhesion strength requirements;
- (8) An industry suggestion to label only display models in retail outlets;
- (9) A proposal to extend the "directory option" to manufacturers of water heaters; and,
- (10) A proposal to label certain unvented heaters.

The 1993 NPR also solicited comments on a second group of proposals, listed below, that had not been previously discussed in the 1988 NPR:

- (1) An industry proposal to exempt central air conditioners from labeling requirements;
- (2) Minor revisions to update and improve the Rule;
- (3) Using, in lieu of the term "EER," the industry terms "AFUE," "SEER," and "HSPF" as the required descriptors of the energy usage of climate control products; and,
- (4) Changing the format of the required EnergyGuide labels.

The 1993 NPR also solicited comment on whether the Commission should

central air conditioners, to disclose the additional information in an industry directory.

require metric measurements. Finally, to obtain information relating to the Regulatory Flexibility Act and Paperwork Reduction Act, the 1993 NPR asked about the effect of the proposed amendments on small businesses and the burden of the Rule's reporting and recordkeeping provisions.

In accordance with 42 U.S.C. 6306(a), the 1993 NPR afforded interested persons the opportunity to present their views in writing and orally at a public hearing. The Presiding Officer did not receive any requests for an oral presentation, so no hearing was held. During the comment period, which extended from March 5 through May 20, 1993, the Commission received 34 comments.¹² These comments were from five appliance manufacturers, three appliance industry trade associations, nineteen public utilities, two utilities trade associations, two state energy offices, one federal agency, one city and one consumer group.¹³

¹² The comments are found on the Public Record at the Federal Trade Commission in Washington, DC under Rulemaking Record Number R611004 (Appliance Labeling Rule). They are grouped under Category D (Comprehensive Review—Industry Comments) and Category DD (Comprehensive Review—Comments from Other Sources). Other material submitted to the Public Record in this proceeding can be found under Category A (Public Notices and Petitions) and Category B (Miscellaneous Staff Materials Assembled Prior to the Initiation of the Rulemaking Proceeding).

¹³ The commenters were: Amana, D-1 and D-2 (references will be to D-1, which is the later version); Whirlpool Corporation ("Whirlpool"), D-3; Maytag, D-4; The Association of Home Appliance Manufacturers ("AHAM"), D-5; The Air Conditioning and Refrigeration Institute ("ARI"), D-6; New Harmony Systems Corporation ("New Harmony"), D-7; Speed Queen, D-8; The Gas Appliance Manufacturers Association ("GAMA"), D-9; Public Service Company of North Carolina, Inc. ("PSCNC"), DD-1; Brooklyn Union Gas ("Brooklyn Gas"), DD-2; The Peoples Gas Light and Coke Company ("Peoples Gas"), DD-3; Mississippi Valley Gas Company ("Mississippi Gas"), DD-4; Pennsylvania Gas and Water Company ("PG&W"), DD-5; Atlanta Gas Light Company ("Atlanta Gas"), DD-6; Piedmont Natural Gas Company ("Piedmont Gas"), DD-7; The American Council for an Energy Efficient Economy ("ACEEE"), DD-8; The Washington State Energy Office ("WSEO"), DD-9; Elizabethtown Gas Company ("Elizabethtown Gas"), DD-10; Covington Gas Company ("Covington Gas"), DD-11; The U. S. Environmental Protection Agency ("USEPA"), DD-12; Gibson County Utility District ("Gibson County Utility"), DD-13; Mountain Fuel Supply Company ("Mountain Fuel"), DD-14; Texas Gas Transmission Corporation ("Texas Gas"), DD-15; City of Palmdale ("Palmdale"), DD-16; Oklahoma Natural Gas Company ("Oklahoma Gas"), DD-17; Memphis Light, Gas and Water Division ("Memphis Electric and Gas"), DD-18; Louisville Gas and Electric Company ("LG&E"), DD-19; Laclede Gas Company ("Laclede Gas"), DD-20; The Electric & Gas Industries Association ("EGIA"), DD-21; The American Gas Association ("AGA"), DD-22; The California Energy Commission ("CEC"), DD-23; ENTEX, a Division of ARKLA, Inc. ("ENTEX"), DD-24; Consolidated Natural Gas Company ("CNG"), DD-25; UGI Utilities, Inc. ("UGI"), DD-26.

IV. Discussion of Comments and Disposition of Issues

A. 1988 NPR Issues on Which Limited Comment Was Solicited

1. The Effect of the Implementation of NAECA 87 on the Rule

NAECA 87 established minimum efficiency standards for many appliances covered by the Rule, which became effective at staggered intervals between January 1, 1988, and January 1, 1993.¹⁴ DOE has adopted rules implementing the standards requirements (hereinafter "DOE's Minimum Efficiency Standards Rule").¹⁵ The 1988 NPR asked whether these standards would narrow the energy usage ranges of comparable products to the point that labeling would no longer be useful and whether, for this reason, the Rule should be modified.¹⁶ In the 1993 NPR, the Commission tentatively concluded that the 1988 NPR record did not support eliminating any product categories because of the new NAECA 87 product standards.¹⁷

Two comments addressed the Commission's tentative 1993 NPR conclusion. CEC agreed with the Commission that the record does not support eliminating any product categories.¹⁸ AHAM recommended that the Commission continue the Rule, but monitor the effect of the new energy standards on the products being offered for sale.¹⁹ Accordingly, the Commission concludes that the current comments do not support any modification of its earlier tentative decision not to eliminate any specific product category from coverage because of the NAECA 87 minimum efficiency standards.

2. Furnace Labeling Requirements

a. Current furnace labeling requirements. Currently, furnaces

(which are defined to include boilers) must bear a label containing only general energy-saving tips and referring the consumer to a fact sheet that retailers must make available to consumers. 305.3(g); 305.11(a)(5)(ii) and Figure 3; 305.11(b)(1)(ii).²⁰ The fact sheets show the combinations of components available and the overall efficiency of any set of component combinations.²¹ In addition, the fact sheets provide costs grids for estimating what the "system" would cost the consumer to operate, depending on geographic location and utility rate structures. 305.11(b)(3)(viii).

b. *The Directory option and product-specific label amendments.* The 1988 NPR proposed to require that the furnace labels disclose (a) the specific product's energy factor, identified as the EER, (b) a "generic" range of EER's for all furnaces that use the same fuel as the labeled unit, and, (c) stronger language directing consumers to either fact sheets or a directory for detailed cost information.

The 1993 NPR analyzed the comments and proposed amending the Rule to require each furnace to bear a label that discloses product-specific information showing the unit's annual fuel utilization efficiency ("AFUE") and a generic range based on the sub-categories in DOE's Minimum Efficiency Standards Rule. The Commission also proposed permitting manufacturers that are members of an industry trade association with a certification program and a directory to make the required efficiency and cost disclosures through the directory instead of preparing fact sheets, provided that the directory met the Rule's criteria.²²

²⁰ The Commission's reasons for the current label and fact sheet disclosure requirements for furnaces are discussed in the SBP at 44 FR 66470-71.

²¹ For example, whether the furnace would be available with a vent damper, standby pilot, automatic ignition, etc.

²² See the discussion in the 1993 NPR at 58 FR 12820-23. In addition to these product-specific label and directory option modifications to the Rule, the Commission proposed the following specific requirements to accommodate several potential difficulties with product-specific labels that some comments raised (see the discussion at 58 FR 12822-23):

(1) When the working units of boilers (or furnaces) are shipped separately from the outer jackets, the units would have to be labeled with hang-tag labels that also have adhesive backing, so the installer could affix the label to the outside of the jacket after the unit is installed;

(2) When boilers are shipped with more than one input nozzle, they would have to be labeled to show the AFUE of the unit when it is set up with the highest firing rate; and,

(3) Boilers that may be set up as either steam or hot water units would have to be labeled with the hot water AFUE.

The Commission did not receive comment on these 1993 NPR proposals, and has incorporated

Five comments responded to the 1993 NPR's request for comments on the above proposals. Amana stated that most central furnace dealers also sell central air conditioning products, so allowing furnace manufacturers the option of being listed in an industry directory in lieu of providing facts sheets would standardize the labeling protocol for these very similar product classes.²³ Amana stated, however, that product-specific furnace labels are of minimal value to consumers for the reasons previously given by GAMA.²⁴ GAMA again opposed a product-specific furnace label requirement, but supported the directory option. It noted that the proposed distribution requirements for directories are reasonable.²⁵

CEC stated that product-specific information on individual products is helpful both to CEC's own standards program and the State's utility incentive programs.²⁶ A building code inspector also commented that his job is made easier and quicker when there are product-specific labels on appliances. Otherwise, it is time-consuming for inspectors to track down the information needed to approve a new or replacement installation of equipment.²⁷

Laclede Gas suggested that if product-specific labels are required, they should show detailed cost information as well as the AFUE.²⁸

Based on these comments, the Commission has determined to adopt its proposed amendments. GAMA's reasons for opposing furnace labeling continue to be unpersuasive to the Commission.²⁹ Similarly, the Commission continues to believe that requiring cost information on furnace labels (as suggested by Laclede Gas) is not advisable, for the reasons discussed in the Rule's Statement of Basis and Purpose.³⁰ Therefore, the Commission is amending

them into the Rule. See section 305.11(a)(5)(ii)(I)-(L) of the amended Rule in "Text of Amendments," below.

²³ Amana, D-1, 1.

²⁴ Amana, D-1, 2. GAMA's reasons for opposing product-specific furnace labels are detailed in the 1993 NPR at 58 FR 12821. See also GAMA's comment (D-9) at page 1.

²⁵ GAMA, D-9, 1-2.

²⁶ CEC, DD-23, 4. CEC stated that it is often difficult to identify the precise model from the model numbers contained in reported information alone, and that it is very useful to have the energy usage on the label attached to the model itself.

²⁷ City of Palmdale, DD-16, 1.

²⁸ Laclede Gas, DD-20, 5.

²⁹ See the discussion at 58 FR 12821-22.

³⁰ See 44 FR 66466 at 66470-71. The differences in regional climate and consumer use patterns make it impractical to disclose estimated annual operating cost as the primary energy usage disclosure for these products.

¹⁴ See 42 U.S.C. 6295. After the effective date of a standard, the manufacture of non-complying products is prohibited. See 42 U.S.C. 6302(a)(5).

¹⁵ 10 CFR Part 430, Subpart C.

¹⁶ Manufacturers annually submit to the Commission energy usage data for their various appliance models. The Commission analyzes these data and publishes "ranges" consisting of the highest and lowest energy use figures for certain appliance categories. The manufacturers disclose the industry-wide ranges on their EnergyGuide labels by means of a bar scale, with a mark indicating where their appliances fall on the bar. For example, the 1992 range for standard size dishwashers was from \$46.00 to \$82.00 (when using electrically heated water) and from \$25.00 to \$46.00 (when heating water with gas). Some manufacturers suggested that, once efficiency standards are implemented, the range for a given product could be so limited (for example, from \$39 to \$41) that providing range information would not be useful.

¹⁷ See 58 FR 12819-20 (March 5, 1993).

¹⁸ CEC, DD-23, 3.

¹⁹ AHAM, D-5, 3.

the requirements for furnaces as proposed in the 1993 NPR. See sections 305.11(a)(5) and .11(c) of the amended Rule in "Text of Amendments," below.

c. New sub-categories for furnaces.

The 1988 NPR proposed that the ranges of comparability for furnaces be reduced from the 70 currently required ranges to a single "generic" range for each fuel type (gas, oil, and electric).³¹ The 1993 NPR proposed instead to adopt as the Rule's ranges of comparability for furnaces the nine sub-categories for furnaces listed in NAECA 87 and used in DOE's Minimum Efficiency Standards Rule, which include a sub-category for both forced-air furnaces and boilers of each fuel type and separate sub-categories for small gas furnaces, mobile home furnaces, and gas steam boilers.³²

Three comments addressed this issue. Amana commented that the NAECA 87 categories would improve consumers' ability to compare products.³³ GAMA and CEC also supported the proposal, but recommended against establishing a separate category for "Small Furnaces."³⁴ GAMA stated that all warm-air furnaces (other than mobile home furnaces) have to meet the same standard and that the NAECA standards, as GAMA believes they will be amended, will not make a distinction between "furnaces" and "small

furnaces."³⁵ CEC showed, on the basis of energy usage figures relating to furnaces marketed in California and received by CEC in connection with its own minimum efficiency standards program, that the ranges of comparability of Gas Furnaces and Small Gas Furnaces are identical at the low end (the minimum efficiency standard) and virtually the same at the high end. CEC also suggested minor nomenclature revisions for purposes of clarification.³⁶

Based on these comments, the Commission is amending Appendix G to the Rule (pertaining to furnaces) in general accordance with the 1993 NPR proposal. The Commission is persuaded by the GAMA and CEC comments, however, that adoption of the proposed sub-category "Appendix G2 to Part 305—Small Furnaces—Gas (Under 45,000 Btu's/hr. Input)" would not provide consumers with significantly different efficiency information from what the Furnaces—Gas sub-category (Appendix G1) will provide. See the amendments to Appendix G in "Text of Amendments," below.

3. Central Air Conditioner and Heat Pump Amendments to Require Range Information on Fact Sheets or in Directories (as Well as on Labels)

Currently, for central air conditioners and heat pumps, the Rule requires that range information appear only on the label.³⁷ In the 1988 NPR, the Commission sought comment on a proposal to amend the Rule to require that the EER and range information appear in fact sheets or directories as well as on the labels. This proposal was expected to assist consumers who might not see the labeled units because they are shopping for these products through directories or fact sheets.³⁸

In the 1993 NPR, noting that no comment was received on this issue in response to the 1988 NPR, the Commission tentatively concluded that adoption of this requirement would be in the public interest. The Commission also noted that ARI's current practice was (as it still is) to include the ranges

in its Directory.³⁹ Amana supported this proposal without giving any specific reasons.⁴⁰

The Commission has determined to amend the Rule as proposed to require that the EER and range information appear on fact sheets or in directories as well as on labels, for the reasons expressed in the 1988 NPR. This amendment parallels the requirements being announced today for furnaces. See sections 305.11(b)(3)(vi) and .11(c)(3)(vi) of the amended Rule in "Text of Amendments," below.

4. Proposed Amendments to Modify Room Air Conditioner Range Sub-categories

Currently, Appendix E to the Rule contains 37 ranges for room air conditioners. The energy efficiency range information the Commission published prior to 1988 indicated that the range of efficiencies of room air conditioners was virtually the same for each of the capacity groupings. Accordingly, reducing the number of ranges from 37 to one was expected to decrease the industry's labeling burden without affecting the information provided to consumers, and the 1988 NPR proposed amending this provision to establish a single generic range.⁴¹

The comments in response to the 1988 NPR on this proposal, however, persuaded the Commission that, because products in the different sub-categories have different features and applications and were required to meet (as of January 1, 1990) different minimum efficiency standards, consumer confusion could result if there were only a single product category range. Further, because NAECA 87 and the DOE's Minimum Efficiency Standards Rule set five different minimum EER's among the ten different capacity groupings, different capacity grouping also seemed justified.⁴² Therefore, the 1993 NPR proposed amending the Rule to include the sub-categories and capacity groupings for room air conditioners appearing in DOE's Minimum Efficiency Standards Rule (which were derived from NAECA 87).

Four comments addressed this issue. Whirlpool unequivocally supported adoption of the proposed NAECA 87/DOE sub-categories.⁴³ AHAM stated that, although there was no consensus among its membership as to how to

³¹ The 70 currently required ranges consist of fourteen ranges, according to capacity rating, for Btu's of input per hour, for each of the three fuel types, with furnaces and boilers fueled by natural gas and oil broken out separately. A "generic range" would encompass all sizes within a fuel type (i.e., one range, rather than fourteen ranges based on capacity groupings, for electric furnaces). See 53 FR 22109.

³² 58 FR 12823; 12839-46 (Proposed Appendices G1-G9 to the Rule). The Commission's reasons for proposing the NAECA 87 sub-categories for furnaces were as follows:

Using the DOE sub-categories would result in consistency between the ranges required by the Rule and DOE's minimum efficiency standards for these sub-categories and thus help manufacturers. These sub-categories also would help consumers in their shopping efforts. For example, for non-gas steam boilers, the lowest efficiency permitted by the standards is 80% (75% for gas-steam boilers). The low end of a single range for all gas-fueled boilers, as proposed in the (1988) NPR would be 75%. Using that figure as an end point on the range would inaccurately suggest to a shopper looking for a gas hot water boiler that a model with an efficiency of 75% would be available, when the least efficient model of that sub-category permitted by the standards would be 80% efficient. Under the system proposed today, with separate ranges for each sub-category, the ranges for boilers (except gas-steam) would show the bottom end of the efficiency range to be at the pertinent minimum efficiency standard of 80%.

Id. at 12823.

³³ Amana, D-1, 1.

³⁴ GAMA, D-9, 2; CEC, DD-23, 4-5.

³⁵ GAMA, D-9, 2. The DOE minimum efficiency standards for both of these sub-categories are the same (78% AFUE). See 10 CFR 430.32(a) (1992).

³⁶ For example, renaming the categories other than "Mobile Home Furnaces" to indicate that they do not include mobile home furnaces, and changing "Boilers-Gas (except gas/steam)" to "Boilers-Gas (except steam)" for consistency. CEC, DD-23, 5. The Commission believes that following this suggestion could result in confusion because of the resultant difference in nomenclature between DOE's furnace sub-categories and the Commission's. Therefore, the Commission is not adopting CEC's suggestion.

³⁷ 305.11(a)(5)(iii)(D) and (E).

³⁸ 53 FR 22109, note 17.

³⁹ See 58 FR 12823-24.

⁴⁰ Amana, D-1, 2.

⁴¹ See 53 FR 22109.

⁴² See 42 U.S.C. 6295(c) and 54 FR 6062, at 6072 (Feb. 7, 1989).

⁴³ Whirlpool, D-3, 4.

group the products, all agree the existing 37 sub-categories are too many.⁴⁴ Amana agreed with reducing and reorganizing the subcategories, but suggested its own groupings, which are somewhat more detailed than those proposed in the 1993 NPR.⁴⁵ CEC stated that it is not necessary for the Commission to use divisions for ranges of comparability that DOE uses for setting standards.⁴⁶ CEC, therefore, suggested instead two sub-categories: "Non-heat-pumps" (broken down into three capacity groupings) and "Heat Pumps" (in one all-inclusive capacity grouping).⁴⁷

CEC's more inclusive sub-categories may frustrate consumers looking for the most efficient product with particular features because they group together room air conditioners with many different features.⁴⁸ On the other hand, Amana did not explain sufficiently why its numerous sub-categories are preferable. The Commission finds that the sub-categories proposed in the 1993 NPR are sufficiently detailed to help consumers select the most efficient product with the features they want. Accordingly, Appendix E of the amended Rule in "Text of Amendments," below, reflects the groupings proposed in the 1993 NPR.

5. Other Products—Proposals to Change Sub-categories

a. *Refrigerators, Refrigerator-freezers and Freezers.* Under the current Rule, there is one range category for refrigerators, one for refrigerator-freezers, and one for freezers.⁴⁹ In response to the 1988 NPR, four comments recommended that the Commission adopt new range categories that parallel the sub-categories established by NAECA 87 and

prescribed in DOE's Minimum Efficiency Standards Rule.⁵⁰

In the 1993 NPR, the Commission proposed adopting the NAECA 87 refrigerator, refrigerator-freezer and freezer sub-categories. The Commission stated that the NAECA 87 sub-categories would enable a consumer who has decided on a product with certain features and a specific door configuration to see a cost range on the label that includes only models with the same features as the labeled unit. The 1993 NPR also proposed adding a sub-category for "All-Refrigerators with Automatic Defrost" (meaning a single-door refrigerator, with automatic defrost, that has a small compartment for ice trays but no compartment for frozen food storage), noting that a separate range would be useful to those consumers who are looking only for such a product.⁵¹ In addition, the Commission proposed changing the span of the capacity groupings within the sub-categories from two cubic feet to four cubic feet.⁵² This would result in fewer (and larger) groupings within each of the 11 sub-categories, with more models within each group for consumers to compare.

Four comments addressed these proposals. Amana, Whirlpool and AHAM supported adoption of the NAECA 87 sub-categories.⁵³ Amana also supported changing from two- to four-cubic-foot increments,⁵⁴ but Whirlpool and AHAM opposed this change. Whirlpool contended that such increments would depict larger units in a given category as being less efficient, which would be inaccurate, since "a higher kWh/year does not mean the unit is less efficient."⁵⁵ AHAM said four-

cubic-foot increments would make it harder for consumers to compare the energy efficiency of similarly sized products.⁵⁶

CEC disagreed with the 1993 NPR's proposed sub-categories, critiquing some assumptions and definitions upon which they were based.⁵⁷ In addition, CEC opposed the Commission's proposal to adopt a sub-category for "All-refrigerators with Automatic Defrost," noting that the term "All-refrigerator" is not used in DOE's Minimum Efficiency Standards Rule, and is defined only in the DOE test procedure for refrigerators, refrigerator-freezers and freezers.⁵⁸

CEC proposed sub-categories very similar to those currently provided in the Rule. The CEC proposal is based on an analysis of different possible sub-category combinations using the actual number of these products in the State of California.⁵⁹ The recommended sub-categories were: Refrigerators; Refrigerator-freezers; and Freezers (with a further breakout into Upright and Chest). Capacity groupings were in four-cubic-foot increments, as proposed in the 1993 NPR. However, CEC's proposal still differs from the current requirements in its breakout of Freezers into Upright and Chest.

The Commission is not persuaded by CEC's comments that the NAECA 87 sub-categories are inappropriate. The NAECA 87 sub-categories are based on features and door configurations; they will benefit consumers because these features are of major significance to them when shopping.⁶⁰ Therefore, the amended Rule adopts the NAECA 87 sub-categories for refrigerators, refrigerator-freezers and freezers. See Appendices A1-A8 and B1-B3 in "Text of Amendments," below.

After analyzing the distribution of models among the capacity groupings, however, the Commission has determined to retain the two-cubic foot increments currently required in the ranges of comparability for these products. There are enough models available in the more popular size groupings so that two-cubic-foot increments will provide consumers with meaningful selections among these

⁴⁴ AHAM, D-5, 3-4.

⁴⁵ Amana, D-1, 2. Attachment. Beyond stating that the proposal does not "accurately group similar products," however, Amana did not explain why its suggested groupings would be preferable to those proposed in the NPR.

⁴⁶ CEC, DD-23, 6.

⁴⁷ *Id.* at 8. The comment contained sample ranges of comparability charts based on CEC's recommended sub-categories. CEC derived the sample range charts using energy usage data on room air conditioners sold in California that had been submitted to CEC in connection with CEC's minimum efficiency standards program. CEC also provided figures showing the number of each model type in each grouping that was marketed in the State of California.

⁴⁸ For example, louvered room air conditioners cannot be used for through-the-wall installation, so consumers looking for a built-in product would find efficiency information for the louvered products superfluous.

⁴⁹ See Appendices A-1, A-2 and B.

⁵⁰ See the discussion in the 1993 NPR at 58 FR 12824-25. NAECA 87 divides refrigerators and refrigerator-freezers into seven sub-categories, based on the configuration of the doors to the two compartments and whether the defrost systems are manual or automatic. It divides freezers into three sub-categories: two for upright (depending on type of defrost system) and one for chest and all other types of freezers. DOE has adopted these sub-categories in its Minimum Efficiency Standards Rule. See 10 CFR 430.32(a).

⁵¹ The DOE test procedure for refrigerators and refrigerator-freezers defines "all-refrigerator" as "an electric refrigerator which does not include a compartment for the freezing and long time storage of food at temperatures below 32 degrees F (0.0 degrees C). It may include a compartment of 0.50 cubic capacity (14.2 liters) or less for the freezing and storage of ice." 10 CFR Part 430, Subpart B, Appendix A-1, 1.4 (1992).

⁵² For example, instead of grouping products in increments of two cubic feet, such as: 5.5 to 7.4, 7.5 to 9.4, etc., the amended appendices would group them in four-cubic-foot increments, such as: 5.5 to 9.4, 9.5 to 13.4, etc.

⁵³ Amana, D-1, 1; Whirlpool, D-3, 4; AHAM, D-5, 4-5.

⁵⁴ Amana, D-1, 1.

⁵⁵ Whirlpool, D-3, 4.

⁵⁶ AHAM, D-5, 4-5.

⁵⁷ CEC, DD-23, 9-19.

⁵⁸ *Id.* at 11. A footnote in the table setting out the minimum efficiency standards for refrigerators, refrigerator-freezers and freezers in DOE's Minimum Efficiency Standards Rule refers to "all refrigerators with automatic defrost," without a hyphen between "all" and "refrigerators." CEC contends that this simply means "all refrigerators," which could just as easily be written "refrigerators."

⁵⁹ *Id.* at 12-19.

⁶⁰ See the discussion in the NPR at 58 FR 12825.

products within the new sub-categories. Moreover, the Commission agrees with AHAM that consumers could find it more difficult to use the ranges of comparability to compare similar models if the capacity groupings were broken into four-cubic-foot increments. The number of different models in some of the four-foot groupings would be so large as to inhibit the consumer selection process. For example, consider a consumer looking for a 19-cubic-foot refrigerator-freezer with automatic defrost and top-mounted freezer and without through-the-door ice service. If the appropriate subcategory were divided into two-cubic-foot increments (18.5 cu. ft. to 20.4 cu. ft.), the consumer would be comparing the labeled model with 180 other models. The use of four-cubic-foot increments would result in the addition of another 215 models, most of which would be sufficiently larger than the desired 19-cubic-foot model (they would be from 20.5 to 22.4 cu. ft.) that the information would be superfluous and likely confusing. Accordingly, the Commission finds that two-cubic-foot increments would be more likely to assist consumer selection efforts than four-cubic-foot increments.

In response to CEC's comments on the proposed "All-Refrigerator with Automatic Defrost" sub-category, the Commission has changed the designation of Appendix A1 from the previously proposed "All-Refrigerators with Automatic Defrost" to "Refrigerators with Automatic Defrost," and is including a definition of "all-refrigerator" within the definition of "electric refrigerator."⁶¹ See Appendix A1 and section 305.3(a)(1) of the amended Rule in "Text of Amendments," below.

b. *Clothes washers and dishwashers.* The 1988 NPR solicited comment on whether the Commission should adopt different sub-categories for other products. The current Rule prescribes for dishwashers and clothes washers two sub-categories each ("Standard" and "Compact").⁶² In response to the 1988 NPR, one comment suggested revising the current two sub-categories for dishwashers based on the internal

water-heating feature for some dishwashers and the two sub-categories for clothes washers based on tub capacity, door configuration, and other features.⁶³ In the 1993 NPR, the Commission proposed to retain the existing sub-categories for dishwashers and clothes washers, noting that NAECA 87 did not create new sub-categories for these two products.⁶⁴ At that time, the standards for the products in DOE's Minimum Efficiency Standards Rule involved only the mandatory inclusion of an energy-saving feature consisting of an option to dry without heat for dishwashers and an unheated wash option for clothes washers.⁶⁵ The Commission noted, however, that if future revisions to the DOE standards appeared to warrant a change in the categories for these products, the Commission would consider the issue at that time.

Five comments addressed this issue. All five supported retaining the current sub-categories for dishwashers.⁶⁶ Four comments, however, suggested changing the sub-categories for clothes washers by adding two further subdivisions—horizontal axis and vertical axis.⁶⁷ In support, AHAM stated that the technologies of the two proposed subdivisions are different and that consumers interested in the horizontal axis market niche should be able to compare products within that subdivision.⁶⁸

Horizontal axis clothes washers (which are generally front-loading) are significantly more energy-efficient than vertical axis washers (generally top-loading). Because the typical door configurations for these products are different, consumers may shop for only one configuration, and information respecting the energy usage of products having the other configuration may not be useful. For example, consumers wanting to stack a clothes dryer on top of their washer to conserve space would only be interested in a front loading washer.

⁶¹ See 58 FR 12825 (March 5, 1993).

⁶² *Id.*

⁶³ See 54 FR 6062, 6077 (Feb. 7, 1989). Both standards were prescribed earlier in NAECA 87, however, and became effective on January 1, 1989.

⁶⁴ Whirlpool, D-3, 4; AHAM, D-5, 5; New Harmony, D-D-7, 1-3 and Attachment; Speed Queen, D-8, 2; CEC, DD-23, 20 (CEC also supported the proposal not to change the sub-categories for clothes washers).

⁶⁵ Whirlpool, D-3, 4; AHAM, D-5, 5; New Harmony, D-D-7, 1-3 and Attachment; Speed Queen, D-8, 2; New Harmony suggested modifying the definition for "energy factor" to include the subdivisions, and Speed Queen suggested that front loaders (usually horizontal axis) should not be included in the same sub-categories with top loaders (usually vertical axis).

⁶⁶ AHAM, D-5, 5.

The Commission finds, therefore, that separate ranges of comparability for these products would benefit consumers. Accordingly, the Commission is retaining the current sub-categories for dishwashers but amending the sub-categories for clothes washers to reflect a further subdivision into top-loading and front-loading models. See Appendix F—Clothes Washers, in "Text of Amendments," below.

6. Energy Cost Descriptor—Proposals to Change From Estimated Annual Operating Cost to an Alternative Descriptor for Some Products

For five appliance categories (refrigerators and refrigerator-freezers, freezers, dishwashers, clothes washers and water heaters), the Rule requires that labels reflect the estimated annual dollar cost of operation for the product and the applicable range of comparable products. This cost information is calculated by using the National Average Representative Unit Costs ("NARUCs") for energy that DOE develops and publishes annually in the *Federal Register*.⁶⁹ The Commission publishes revised ranges of comparability annually in the *Federal Register* if the upper or lower limits change by 15% or more from the previously published ranges. If the ranges do not change, the Commission publishes a notice that the prior range is still applicable for the next year.

The 1988 NPR solicited comment on using alternate energy descriptors that would remain constant, rather than dollar descriptors. It proposed that the labels disclose energy usage in kilowatt-hours for electrically fueled products, therms for natural gas products, and gallons for oil-fueled water heaters. In the alternative, the 1988 NPR proposed using an energy factor similar to the EER for furnaces, room air conditioners, and central air conditioners.⁷⁰ The comments submitted in response to the 1988 proposal generally favored the elimination of dollar energy usage descriptors in favor of an energy consumption descriptor on labels for refrigerators, refrigerator-freezers and freezers, clothes washers, and dishwashers. In contrast, the comments generally favored either retention of dollar cost or use of an energy factor on labels for water heaters.⁷¹

In the 1993 NPR, the Commission noted that most appliance models

⁶⁹ See 42 U.S.C. 6293(b)(4). These energy cost figures are incorporated into § 305.9 of the Commission's Rule.

⁷⁰ See 53 FR 22100-10.

⁷¹ See 58 FR 12826-28.

⁶¹ CEC also stated that refrigerator-freezers with internal freezers are not mentioned in DOE's or the Commission's regulations but should be covered by the Rule. DD-24 at 12. In fact, these products are already covered by the definition of refrigerator-freezer in section 305.3(a)(2) of the Rule. Finally, CEC expressed dissatisfaction with the fact that refrigerators combined with other appliances (usually stoves) are not covered by the Rule. Such coverage is not possible, however, because there is at this time no DOE test to measure their energy use.

⁶² See Appendix C (Dishwashers) and Appendix F (Clothes washers).

change about every three years, whereas the DOE energy costs change annually because of fuel cost changes. If energy cost changes affect the upper or lower limits of the ranges of comparability by 15% or more, new labels are required. As a result, a floor model on display for a lengthy time may show an operating cost that is different from the cost shown on an identical, newer unit delivered to a consumer's home because the Commission has required new labels, not because of any change in the product's efficiency. For the same reason, two identical floor models, manufactured in different years, may display different operating costs. Also, models with different features can have labels based on different DOE cost figures, making it unlikely that average consumers can accurately compare their energy usage. As a result, many consumers who are familiar with energy cost information may question the accuracy of cost information on labels.⁷²

Pursuant to EPCA, labels may disclose an alternate energy use figure, determined in accordance with DOE tests, if the Commission determines that estimated annual operating cost is not likely to assist consumers in making purchasing decisions or is not economically feasible.⁷³ For the reasons set forth in the 1993 NPR, the Commission concludes that use of a dollar figure as the primary descriptor of energy usage is not likely to assist consumers in making purchasing decisions regarding refrigerators, refrigerator-freezers, freezers, clothes washers, dishwashers, and water heaters. Providing such label information may adversely affect the value of the labeling program.⁷⁴ Below, the Commission discusses the specific alternative disclosures to be made for each product category.

a. Refrigerators, refrigerator-freezers and freezers. In the 1993 NPR, the Commission proposed using kilowatt-hours per year ("kWh/year") as the primary energy usage descriptor instead of a dollar cost on labels for refrigerators, refrigerator-freezers and freezers.⁷⁵ The Commission stated that, although a kWh/year energy usage descriptor is more technical, its use would minimize label changes. The Commission said that those consumers who want to use a dollar cost figure can use the cost grid on the label that was proposed to supplement the kWh/year energy usage descriptor.

The eight comments that addressed the proposal strongly supported it.⁷⁶ Several noted that this type of disclosure is advantageous because it is the same disclosure that Canada requires on its EnerGuide labels for appliances.⁷⁷ Two suggested that labels include definitions of kWh/year.⁷⁸ Therefore, the Commission has determined to require the disclosure of kWh/year as the energy usage descriptor for refrigerators, refrigerator-freezers and freezers. The Commission also is requiring that a definition for kWh/year be used on the labels.

Because the kWh/year figures can easily be multiplied by an appropriate cost per year for electricity to provide an estimated annual operating cost for the labeled product and the ranges of comparability, the Commission has determined to no longer require that the labels for refrigerators, refrigerator-freezers and freezers contain a cost grid. However, the primary kWh/year disclosure will be supplemented by a single disclosure of estimated annual operating cost in the form of a statement at the bottom of the label. This statement will show the operating cost for the labeled product derived using the DOE annual average cost for electricity. The statement will identify the specific costs per unit for electricity and the year DOE published it.⁷⁹ Because the cost figure in the statement will be supplemental information, rather than the primary basis for product comparisons, the cost figure only need be revised whenever a general revision of labels is occasioned by a change of more than 15% in the kWh/year ranges of comparability.⁸⁰ This approach will enable consumers to compare generally the energy usage of products expressed as an operating cost. This figure supplements the main energy usage descriptor by giving consumers some sense at a glance of how energy usage differences are translated into dollars and cents. This should be helpful for those consumers who do not know their local utility

rates. See § 305.11(a)(5)(i)(E) and the Sample Label for refrigerator-freezers in the Amended Rule in "Text of Amendments," below.

b. Clothes washers and dishwashers. The Rule currently requires labels for clothes washers and dishwashers to contain two energy descriptors—one to show the cost of operation for each water-heating method (electricity or gas).⁸¹ The 1988 NPR proposed replacing the two dollar operating cost disclosures with disclosures of kWh/year and therms per year.⁸² Specifically, the Commission proposed that one disclosure would show kWh per cycle (to run the machine and heat the water) when an electric water heater is used. The other would show kWh per cycle (to run the machine) and therms of gas per cycle (to heat the water) when the product is used with a gas water heater. This approach would require two sets of ranges, as well—one under each disclosure.

In the 1993 NPR, the Commission reiterated that use of a dollar cost disclosure for these products is unlikely to assist consumers in making purchase decisions, and that simplified labels that used alternative energy usage descriptors would be better. The Commission further stated that disclosing the energy used per cycle, as proposed in the 1988 NPR, would require two disclosures that would clutter the label and possibly confuse consumers.⁸³

In the 1993 NPR, the Commission therefore proposed using an energy factor as the alternative descriptor because it would result in a label with only one energy usage descriptor and range disclosure, as on labels for all other products. As discussed in note nine, above, an energy factor is a numerical measure of the useful output of an appliance's services divided by the energy input. The DOE test procedures assume, for purposes of calculating the energy factor, that the water used by the appliances is electrically heated. Accordingly, the procedures yield a single energy factor for a dishwasher or clothes washer disclosure, instead of two. The Commission also proposed

⁷⁶ Amana, D-1, 2-3; Whirlpool, D-3, 2; Maytag, D-4, 1-2; AHAM, D-5, 6-10; ACEEE, DD-8, 1; WSEO, DD-9, 2; EGIA, DD-21, 1-2; CEC, DD-23, 20.

⁷⁷ Amana, D-1, 3; Maytag, D-4, 3-4; AHAM, D-5, 8-9.

⁷⁸ ACEEE, DD-8, 1: "A kilowatt-hour is a measure of electricity use." ACEEE also suggested making clear that the lower the kWh/year, the better the efficiency of the product; WSEO, DD-9, 2: "Energy efficient freezers use fewer kilowatt-hours per year and cost less to run. A kilowatt-hour is a measure of electricity."

⁷⁹ See discussion of the operating cost statement in connection with the elimination of cost grids in Part IV.B.4.b., below.

⁸⁰ The operating cost statement will not include a range of operating costs.

⁸¹ See Sample Labels for clothes washers and dishwashers in Appendix K of the Rule. Although the motors that power clothes washers and dishwashers run on electricity, the source of the energy used to heat the water they use could be either natural gas or electricity. When these products use water heated with natural gas, heating the water accounts for fifty percent of the energy consumed during testing. When they use electrically heated water, eighty percent of the energy used by the product is consumed in heating the water.

⁸² See 53 FR 22110 at note 22.

⁸³ See 58 FR 12827.

⁷² See 58 FR 12827 at note 85.

⁷³ 42 U.S.C. 6294(c)(1)(A)(ii).

⁷⁴ See 58 FR 12827.

⁷⁵ Id.

retaining the two cost grids that are on the labels: one showing various annual costs of operation with electrically heated water (calculated using various costs for electricity), and one for gas-heated water (using various costs for gas). The Commission suggested that this labeling approach would permit easier comparisons among similar models and that the two cost grids would enable consumers to calculate annual operating costs and compare models on the basis of how their water is heated.

Eighteen comments addressed this proposal.⁸⁴ Four supported the proposal.⁸⁵ ACEEE preferred energy factor to EER,⁸⁶ and WSEO supported use of an energy factor because "it is consistent with past practice, industry terminology and the DOE test procedures."⁸⁷ CEC noted that "there is no easily understood way of describing the efficiency of a dishwasher, clothes washer, or water heater. Thus, the best we can hope for is to have an energy factor which the consumer recognizes as a measure of efficiency and that the consumer recognizes that a high [energy] factor means high efficiency."⁸⁸

Fourteen comments opposed the proposal.⁸⁹ These comments contended that an energy factor is too complicated and confusing and will mean nothing to consumers.⁹⁰ Five suggested changing

to an energy consumption disclosure, such as kilowatts per cycle or per year.⁹¹ Nine recommended retaining the estimated annual operating cost.⁹²

Two of the comments favoring estimated annual operating cost included consumer survey results in support of their position. ENTEX attached consumer survey results indicating that 80% of 200 consumers surveyed preferred the current label when asked to compare the 1993 NPR Sample 4 dishwasher label with the current (estimated annual operating cost) dishwasher label.⁹³ Mississippi Gas's results of a similar consumer survey indicated that 48.5% of 200 mall intercept consumers⁹⁴ preferred an estimated annual operating cost disclosure, as did nine out of ten consumers interviewed on videotape.⁹⁵

Some of the comments supporting a cost disclosure contended that an energy factor disclosure actually would mislead consumers.⁹⁶ Several referred to the 1979 Statement of Basis and Purpose, in which the Commission concluded that, for appliances other than climate control equipment, any alternative to the estimated annual operating cost disclosure predicated on the DOE tests (including the most often cited alternative—the energy factor) would not be likely to assist consumers in making purchasing decisions.⁹⁷

The five comments favoring an energy consumption disclosure recommended the use of kilowatt-hours—four suggesting kilowatt-hour use per cycle (kWh/cycle)⁹⁸ and one suggesting kWh/cycle or kilowatt-hour use per year (kWh/year).⁹⁹ Whirlpool, Maytag, and AHAM commented that consumers are familiar with kilowatt-hours because they see them every month on their electric bills.¹⁰⁰ Whirlpool contended that, with a disclosure of kWh/cycle, dual disclosures and cost grids would not be necessary, since consumers would have all they need to make a comparative purchasing decision.

Whirlpool suggested that those few consumers who would want to know the estimated annual operating cost of their appliance with a gas water heater could probably obtain the information from the manufacturer.¹⁰¹ AHAM recommended disclosing kWh/cycle as the main disclosure and disclosing additionally the percentage reduction in operating cost if a gas water heater is used.¹⁰² AHAM and Speed Queen pointed out that a kilowatt-hour disclosure would be consistent with the requirements of the Canadian Energuide labels for these products, with Speed Queen specifically mentioning kWh/year, rather than kWh/cycle.¹⁰³

In the 1993 NPR, the Commission explained its reasons for proposing not to require the disclosure of estimated annual operating cost as the primary energy usage disclosure on labels. Those reasons are summarized in Part IV.A.6., immediately above.¹⁰⁴ The comments favoring the continued use of estimated annual operating cost on labels for these products have not provided any new information that would support a change in the Commission's tentative conclusion about this issue. The Commission rejects, therefore, the suggestions that operating cost be retained as the primary descriptor on dishwasher and clothes washer labels, and reiterates its conclusion that estimated annual operating cost as the primary energy usage disclosure is not likely to assist consumers in making purchasing decisions with respect to these products.

The comments supporting the Commission's proposed use of energy factor did not elaborate on why they believed this descriptor would be appropriate.¹⁰⁵ In contrast, the comments opposing the use of energy factor were unanimous in the specific criticism that the term would mean nothing to consumers and would confuse them.¹⁰⁶ For example, Maytag stated that it was difficult to explain energy factor sufficiently to Maytag employees, even when the person

⁸⁴ Comments from the appliance industry, the state agencies, and the consumer group were specifically related either to both dishwashers and clothes washers, or clothes washers only (New Harmony, D-7, 1-3, and Speed Queen, D-8, 1). Comments from gas utilities generally encompassed dishwashers, clothes washers, and water heaters, with a clear emphasis on water heaters. Some utilities rejected use of an energy factor without mentioning any specific product category (see, Brooklyn Gas, DD-2, 1; Mississippi Gas, DD-4, 1-2, 4; PG&W, DD-5, 1; Memphis Electric and Gas, DD-18, 1-2).

⁸⁵ ACEEE, DD-8, 1; WSEO, DD-9, 1-2; CEC, DD-23, 20; New Harmony did not specifically endorse the use of an energy factor, but did suggest a specific definition for the term, thus implying acceptance of it. D-7, 1-3.

⁸⁶ ACEEE, DD-8, 1. The comment was in response to a question in the 1993 NPR (see Question 1. a., at 58 FR 12830).

⁸⁷ WSEO, DD-9, 2.

⁸⁸ CEC, DD-23, 23.

⁸⁹ Whirlpool, D-3, 2; Maytag, D-4, 1-2; AHAM, D-5, 6-7, 9-10; Speed Queen, D-8, 1; PSCNC, DD-1, 2; Brooklyn Gas, DD-2, 1; Peoples Gas, DD-3, 1; Mississippi Gas, DD-4, 1-2, 4; PG&W, DD-5, 1; Memphis Electric and Gas, DD-18, 1-2; LG&E, DD-19, 3-4; EGIA, DD-21, 2; AGA, DD-22, 2-4; ENTEX, DD-24, 2-3.

⁹⁰ See, for example, Whirlpool, D-3, 3 (energy factors have meaning to engineers, but not to consumers); Maytag, D-4, 1-2 (energy factors would be very difficult and even overwhelming to consumers and retail salespeople). Mississippi Gas suggested that the use of an energy factor could discriminate against minority and low income households and attached the results of a consumer survey in support of its contention. DD-4, 1-2.

⁹¹ Whirlpool, D-3, 2; Maytag, D-4, 1-2; AHAM, D-5, 6-7, 9-10; Speed Queen, D-8, 1; EGIA, DD-21, 2.

⁹² PSCNC, DD-1, 2; Brooklyn Gas, DD-2, 1; Peoples Gas, DD-3, 1; Mississippi Gas, DD-4, 1-2, 4; PG&W, DD-5, 1; Memphis Electric and Gas, DD-18, 1-2; LG&E, DD-19, 3-4; AGA, DD-22, 2-4; ENTEX, DD-24, 2-3.

⁹³ DD-24, 4, Attachment, 16.

⁹⁴ DD-4, 3, Attachment, 17-18.

⁹⁵ DD-4, Attachment, 30.

⁹⁶ This argument pertains only to water heaters, however, as discussed in Part IV. A. 6. c., below.

⁹⁷ The reference is to 44 FR 66478 (Nov. 19, 1979). See Brooklyn Gas, DD-2, 1; LG&E, DD-19, 2; AGA, DD-22, 2-3.

⁹⁸ Whirlpool, D-3, 2; Maytag, D-4, 1-2; AHAM, D-5, 6-7, 9-10; EGIA, DD-21, 2.

⁹⁹ Speed Queen, D-8, 1.

¹⁰⁰ Whirlpool, D-3, 3; Maytag, D-4, 2; AHAM, 10.

¹⁰¹ Whirlpool, D-3, 3.

¹⁰² AHAM, D-5, 6-7, 9-10.

¹⁰³ AHAM, D-5, 8-9; Speed Queen, D-8, 1.

¹⁰⁴ See 58 FR 12826-27.

¹⁰⁵ ACEEE supported its use without elaboration. ACEEE, DD-8, 1. WSEO favored energy factor because its use would be consistent with the DOE test and with "industry terminology and past practice," (presumably a reference to its use in the GAMA Directory for water heaters, because the current labels for clothes washers and dishwashers require the disclosure of estimated annual operating cost, not an energy factor.) WSEO, DD-9, 2. CEC acknowledged that communication of energy usage for these two product categories is difficult to accomplish, and that an energy factor is the best one could hope for. CEC, DD-23, 23.

¹⁰⁶ See note 89, above.

explaining the term thoroughly understood the concept. Maytag also contended that consumers seeing energy factors would be confused by the association of higher numbers with higher efficiency. For operating cost descriptors for clothes washers and dishwashers, "smaller is better."¹⁰⁷ The Commission is therefore persuaded by the comments that the energy factor proposed in the 1993 NPR is not the most appropriate alternative to operating cost as an energy usage descriptor for these two product categories.

The Commission concludes that an energy consumption descriptor in terms of kilowatt-hours of electricity consumed per year (kWh/year) would be the best alternative disclosure of energy usage for clothes washers and dishwashers. As several comments pointed out, consumers are familiar with kilowatt-hours from their utility bills, so kilowatt-hour use will be more familiar than an energy factor.¹⁰⁸ The required disclosure will be in terms of electricity consumed using an electric water heater alone, without showing energy consumption for use of the product with both an electric and gas water heater. By comparing the kWh/year of one product to another, consumers will be able to see how the products use energy relative to one another.¹⁰⁹ This fulfills the EnergyGuide program's purpose of providing consumers with comparative energy usage information for making purchasing decisions.

The Commission agrees with Whirlpool that use of a kilowatt-hour usage descriptor eliminates the need for a cost grid because those consumers who so wish may multiply the kWh figure by a cost per kWh for electricity and convert the descriptor into a cost-per-year figure.¹¹⁰ However, as with labels for refrigerators, refrigerator-freezers and freezers, water heaters, and room air conditioners, the primary kWh/year disclosure will be supplemented by an estimated annual operating cost disclosure in the form of a statement at the bottom of the label. For clothes washers and dishwashers, this statement will show two operating costs for the labeled product—one calculated on the basis of its use with an electric water heater, and one with a

gas water heater—both derived using the DOE annual average cost for electricity and gas. (As in the case of the current labels, the cost for operation with an oil-fired water heater is not included because these products account for less than one percent of all residential water heater sales.) The statement will identify the specific costs per unit for the two fuels and the year DOE published them.¹¹¹ This supplemental disclosure will enable consumers to obtain a sense of the magnitude of the monetary difference in operating costs between different models, without requiring that they make their own mathematical calculation.

The Commission is amending the Rule to require a disclosure of kWh/year on labels for these products, rather than adopting a kWh/cycle descriptor, as several comments suggested.¹¹² A kWh/year disclosure, because it provides a larger spread of figures than would a kWh/cycle, discloses differences in energy usage that will be easier for consumers to perceive. Obviously, much more electricity is consumed during a year than during one cycle of operation. Thus, kWh/year will show larger figures and greater intervals between the figures for different models and, therefore, will illustrate more clearly the magnitude of the efficiency difference. Moreover, a kWh/year disclosure will be consistent with the amended disclosure requirements for the other non-climate-control products and with the Canadian EnerGuide program's required disclosures for these two products (as well as the other products covered by the Canadian program.) Accordingly, the final amended Rule requires that labels for dishwashers and clothes washers disclose the products' energy usage in terms of kilowatt-hours used per year. See section 305.11(a)(5)(i)(E) through (J), Appendices C and F, and Sample Labels for dishwashers and clothes washers in "Text of Amendments," below.

c. *Water heaters.* As discussed in the 1993 NPR, the comments responding to the proposal to change from a cost disclosure to energy factor or kWh, therms (of gas), or gallons (of oil) per year for water heaters were divided between keeping the estimated annual operating cost and switching to the energy factor.¹¹³ Citing its reasoning in the 1988 NPR, the Commission tentatively concluded in the 1993 NPR

that, as a primary disclosure of energy cost, a dollar disclosure is not likely to assist consumers in making purchasing decisions.¹¹⁴ Because the energy factor is already in use within the industry and is easily converted to estimated annual operating cost, the Commission proposed to require it for water heaters, even though it could make accurate cross-fuel comparisons difficult.¹¹⁵

Of the 23 comments on this proposal,¹¹⁶ only three favored replacing estimated annual operating cost with an energy factor for water heaters.¹¹⁷ ACEEE and WSEO favored the use of energy factor with little elaboration.¹¹⁸ As with dishwashers and clothes washers, CEC supported the energy factor as the best way to communicate the efficiency of water heaters.¹¹⁹ CEC noted that federal standards and enforcement actions and incentive payments from utilities are all based on efficiency values, rather than dollar values, which can cause confusion by changing annually for the same basic design.¹²⁰

Almost all 20 comments opposing the replacement of estimated annual operating cost with the energy factor disclosure stated that energy factors would be much more confusing to consumers, who understand and are used to dollar cost disclosures. Many argued that an energy factor disclosure could mislead consumers because the range of energy factors is from approximately .55 to .65 for gas water heaters and from .86 to .95 for electric water heaters. They suggested that this could lead consumers to conclude erroneously that electric water heaters would be less costly to run.¹²¹ Some

¹¹⁴ See 53 FR 22109-10. See also 42 U.S.C. 6294(c)(1)(A)(ii).

¹¹⁵ The Commission noted that consumers who wished to, could use the cost grids at the bottom of the labels to make cross-fuel comparisons.

¹¹⁶ PSCNC, DD-1, 2; Brooklyn Gas, DD-2, 1; Peoples Gas, DD-3, 1; Mississippi Gas, DD-4, 1-2, 4; PG&W, DD-5, 1; Atlanta Gas, DD-6, 1; Piedmont Gas, DD-7, 1-2; ACEEE, DD-8, 1; WSEO, DD-9, 1-2; Elizabethtown Gas, DD-10, 1-2; Covington Gas, DD-11, 1; Gibson County Utility, D-13, 1; Mountain Fuel, DD-14, 1-2; Texas Gas, DD-15, 3-4; Oklahoma Gas, DD-17, 1-2; Memphis Electric and Gas, DD-18, 1-2; LG&E, DD-19, 3-4; Laclede Gas, DD-20, 1-5; AGA, DD-22, 2-4; CEC, DD-23, 20, 23; ENTEX, DD-24, 2-3; Consolidated Natural Gas, DD-25, 1-4; UGI, DD-26, 1-2.

¹¹⁷ ACEEE, DD-8, 1, WSEO, DD-9, 1-2, and CEC, DD-23, 20.

¹¹⁸ ACEEE, DD-8, 1, WSEO, DD-9, 2.

¹¹⁹ CEC, DD-23, 23.

¹²⁰ *Id.* at 20.

¹²¹ See, e.g., Peoples Gas, DD-3, 1; Piedmont Gas, DD-7, 1-2; Elizabethtown Gas, DD-10, 1-2; Mountain Fuel, DD-14, 1-2; Texas Gas, DD-15, 3-4; Oklahoma Gas, DD-17, 1-2; LG&E, DD-19, 3-4; Laclede Gas, DD-20, 1-5; ENTEX, DD-24, 2-3. The current ranges of estimated annual operating costs for all sizes of water heaters are from \$122 to \$216.

¹⁰⁷ Maytag, D-4, 1.

¹⁰⁸ Whirlpool, D-3, 3; Maytag, D-4, 2; AHAM, 10.

¹⁰⁹ The range of comparability scale will, as before, provide information as to how the labeled product compares in energy usage to all other similarly sized products.

¹¹⁰ Whirlpool, D-3, 3. See the discussion of elimination of cost grids on all labels in Part IV.B.4.b., below.

¹¹¹ See discussion of the operating cost statement in connection with the elimination of cost grids in Part IV.B.4.b., below.

¹¹² See Whirlpool, D-3, 2; Maytag, D-4, 1-2; AHAM, D-5, 6-7, 9-10; EGIA, DD-21, 2.

¹¹³ See discussion at 58 FR 12827-28.

stated that requiring energy factors would make it difficult for consumers to compare water heaters using different fuels.¹²²

Several comments also stated that energy factors do not take into consideration the total system efficiency of the energy source fueling the water heater.¹²³ The implication is that electricity is considerably more expensive and energy-intensive to produce than natural gas. For example, Laclede Gas contended that from extraction to point of end use, 91% of the energy content of natural gas is delivered to customers, whereas for electricity, 27% of the energy content is delivered.¹²⁴

Eight comments contended that consumers are frequently in a position to judge energy cost before making their selection because they have increasing opportunities to see water heaters before purchase in building supply stores, retail outlets and in new homes.¹²⁵ They concluded that such consumers, therefore, should be provided with estimated annual operating cost on labels. Several comments quoted with approval the Commission's conclusion in the 1979 Statement of Basis and Purpose that any alternative to the estimated annual operating cost disclosure predicated on the DOE tests (including the most often cited alternative—the energy factor) would not be likely to assist consumers in making purchasing decisions.¹²⁶

As with dishwashers and clothes washers, the Commission explained in the 1993 NPR why it proposed changing from requiring an estimated annual operating cost disclosure as the primary energy usage descriptor on labels for water heaters.¹²⁷ Those reasons are summarized in Part IV.A.6., above.¹²⁸ As with clothes washers and dishwashers, the comments favoring the continued use of estimated annual operating cost on labels for water heaters have not provided any new information that would support a change in the Commission's tentative decision on this issue. The Commission rejects, therefore, the suggestions that operating

cost be retained as the primary disclosure of energy usage on water heater labels, and reiterates its conclusion that estimated annual operating cost as a primary energy usage descriptor is not likely to assist consumers in making purchasing decisions with respect to these products.

As in the case of clothes washers and dishwashers, the comments supporting the Commission's proposed use of energy factor for water heaters did not elaborate on why they believed this descriptor would be appropriate. ACEEE supported its use without further comment.¹²⁹ WSEO favored energy factor because its use would be consistent with the DOE test and with "industry terminology and past practice," which is presumably a reference to its use in the GAMA Directory for water heaters.¹³⁰ CEC acknowledged that communication of energy usage for water heaters is difficult to accomplish, and that an energy factor is the best that could be hoped for.¹³¹ The Commission is persuaded by the comments that the energy factor is not the best energy usage descriptor for water heaters.

The Commission has determined to amend the Rule instead to require that labels for water heaters disclose the products' energy usage in terms of kilowatt-hours used per year (for electric water heaters), therms of natural gas used per year (for natural gas-fueled water heaters), and gallons used per year (for propane-gas-fueled and oil-fueled water heaters), as proposed in the 1988 NPR.¹³² As in the case of dishwashers and clothes washers, this disclosure has the advantage of obviating the need for cost grids on the labels by providing consumers with the option of determining cost by multiplying the labeled value by the appropriate cost per unit of the applicable fuel, which will also be disclosed (see below). This calculation will facilitate consumers' ability to make cross-fuel comparisons, if they wish to do so. Moreover, it provides a disclosure in terms that will be familiar to consumers because they see kWh, therms or gallons on their fuel bills. Finally, it maintains consistency among all the labels for non-climate-control products covered by the Rule.

This primary disclosure will be supplemented by an estimated annual operating cost disclosure in the form of a statement at the bottom of the label.

This statement will show the operating cost for the labeled product derived using the DOE annual average cost for electricity, gas, or oil, as appropriate. The statement will identify the specific cost per unit for the applicable fuel and the year DOE published it.¹³³ This statement will provide a basis for making cross-fuel comparisons. The additional advantages of retaining operating cost as supplemental information have been discussed in Part IV.A.6.a. and b., above.¹³⁴ See Amended Rule sections 305.11(a)(5)(i)(E) through (J), Appendices D1 through D3, and the Sample Labels for water heaters in "Text of Amendments," below.

7. Proposed Changes in Label Adhesion Strength Requirement

Section 305.11(a)(4)(i) of the Rule specifies the paper stock and minimum peel adhesion capacity of labels for covered products. In addition to requiring that adhesive labels be applied "so they can be easily removed without use of tools or liquids, other than water," this section requires that the label adhesive must have "a minimum peel adhesion capacity of 24 ounces per inch width." Prior to the 1988 NPR, the Commission received requests to amend this provision to make the labels easier for consumers to remove. The 1988 NPR sought comment on whether to lower the minimum peel adhesion capacity, and on whether a performance standard should be adopted instead.¹³⁵

In the 1993 NPR, the Commission discussed the comments responding to the 1988 NPR, which favored an amendment that would make it easier to remove labels. The Commission concluded that the current standard can result in labels sticking to products with excessive tenacity and proposed a specific performance standard. To provide the industry with guidance as to an acceptable minimum adhesion capacity sufficient to meet the performance standard, the Commission also proposed changing the minimum peel adhesion capacity in the Rule from 24 to 12 ounces and changing it from a requirement to a suggestion.¹³⁶

Four comments addressed this issue. One supported the proposal, saying that excessive label tenacity has been an annoying problem.¹³⁷ Three others

for gas water heaters and from \$377 to \$464 for electric water heaters. 56 FR 46534 (Sept. 13, 1991).

¹²² See, e.g., Brooklyn Gas, DD-2, 1; PG&W, DD-5, 1; Consolidated Gas, DD-25, 3.

¹²³ See, e.g., Peoples Gas, DD-3; Mississippi Gas, DD-4, 4; Laclede Gas, DD-20, 3.

¹²⁴ Laclede Gas, DD-20, 3.

¹²⁵ Peoples Gas, DD-3, 1; Elizabethtown Gas, DD-10, 1-2; Covington Gas, DD-11, 1; Gibson County Utility, D-13, 1; Texas Gas, DD-15, 4; AGA, DD-22, 3; Consolidated Gas, DD-25, 1-2; UGI, DD-26, 2.

¹²⁶ See note 97, above.

¹²⁷ See 58 FR 12828.

¹²⁸ See 58 FR 12826-27.

¹²⁹ ACEEE, DD-8, 1.

¹³⁰ WSEO, DD-9, 2.

¹³¹ CEC, DD-23, 23.

¹³² See 53 FR 22110, note 22.

¹³³ See discussion of the operating cost statement in connection with the elimination of cost grids in Part IV.B.4.b., below.

¹³⁴ See also the discussion of the elimination of cost grids in Part IV.B.4.b., below.

¹³⁵ See 53 FR 22111.

¹³⁶ See 58 FR 12825-26 and 12835 (proposed section 305.11(a)(4)(i)).

¹³⁷ Amana, D-1, 2.

supported the proposal, but emphasized that the Rule should not require any specific adhesion capacity.¹³⁸

The Commission concludes that the record supports revising the Rule to state a performance standard for label adhesion capacity without requiring any specific adhesion capacity number. The Rule will state, for guidance only, an adhesion capacity number (12 ounces) that the Commission deems adequate to comply with the performance standard. See section 305.11(a)(4)(i) of the Amended Rule in "Text of Amendments," below.

8. Suggestion To Label Only Display Models In Retail Outlets

The 1988 NPR also requested comment on a manufacturer's suggestion that the Rule permit manufacturers to label only display models in retail outlets to reduce labeling cost while still providing information to the public. Because the Commission interprets EPCA as requiring a label on all models of covered products,¹³⁹ the 1988 NPR sought comment on whether the Commission should submit a special report to Congress recommending a change in EPCA to allow the Commission to amend the Rule in this regard.¹⁴⁰

The six comments responding to the discussion of this issue in the 1988 NPR opposed the proposal to label only display models. In the 1993 NPR, therefore, the Commission stated that it intended to take no action on it.¹⁴¹ The one comment on the proposal to label only display models supported the Commission's 1993 NPR tentative decision to take no action on the proposal.¹⁴² The Commission, therefore, will not submit a special report to Congress recommending such a change.

9. Directory Option for Water Heaters

The 1988 NPR solicited comment on a proposal from GAMA to repeal the current product-specific labeling requirements for water heaters and, instead, to allow manufacturers to provide required energy usage information in an industry directory and to label their products with labels that provide no energy usage information or

limited information. Of the six comments addressing this proposal, only one favored it and the Commission decided to leave the current water heater labeling requirements unchanged. The Commission noted that GAMA's Directory can be a useful voluntary supplement to the labels for those consumers and industry members who choose to use it.¹⁴³

Four comments addressed this issue.¹⁴⁴ No new evidence or arguments were raised. GAMA reiterated its previous position that furnaces and water heaters typically are purchased from contractor-installers and are not seen on display by consumers before their purchase and installation and, therefore, should not be subject to mandatory labeling requirements.¹⁴⁵ Atlanta Gas supported, without specific reasons, the Commission's position to continue requiring product-specific labels for water heaters instead of requiring only that they be listed in a directory.¹⁴⁶ A comment from a building code inspector stated that labels on products reduce building code inspection delays and make inspections easier.¹⁴⁷ CEC reported that the major manufacturers use so many manufacturers' names, trade names, and model numbers that it is often very difficult to determine with any degree of certainty what data in a directory, either GAMA's or CEC's, pertain to any specific unit.¹⁴⁸

Eight other comments bear on this issue; all of these were received from members of the natural gas industry who opposed requiring energy factors on labels for water heaters, clothes washers, and dishwashers. They commented that appliances, including water heaters, increasingly are on display in stores, building supply outlets, and new homes. They concluded that consumers can therefore make purchasing decisions that consider the information on labels attached to the products.¹⁴⁹

¹³⁸ See 58 FR 12826.

¹³⁹ GAMA, D-9, 1; Atlanta Gas, DD-6, 2; Palmdale, DD-16, 1; CEC, DD-23, 20.

¹⁴⁰ GAMA, D-9, 1.

¹⁴¹ Atlanta Gas, DD-6, 2.

¹⁴² Palmdale, DD-16, 1.

¹⁴³ CEC, DD-23, 20.

¹⁴⁴ Peoples Gas, DD-3, 1; Elizabethtown Gas, DD-10, 1-2; Covington Gas, DD-11, 1; Gibson County Utility, D-13, 1; Texas Gas, DD-15, 4; AGA, DD-22, 3; Consolidated Gas, DD-25, 1-2. "Market trends suggest that labels do indeed assist a large number of consumers in purchases of appliances such as water heaters. The fact that most water heaters are purchased either as emergency replacement of leaking water heaters or in connection with the purchase of a new home does not necessarily lead one to conclude that consumers do not take the time to look at the labels on appliances that they are planning to purchase. In

Accordingly, the Commission is retaining the product-specific labeling requirements for water heaters.

10. Proposal to Label Certain Unvented Heaters

The Commission in 1979 exempted electric unvented heaters, or "space heaters," from the Rule.¹⁵⁰ In 1984, DOE published a final test procedure for "unvented heaters" that use natural gas, propane and kerosene.¹⁵¹ Consequently, in the 1988 NPR, the Commission sought comment on whether to label these other unvented heaters.¹⁵²

In the 1993 NPR, after analyzing the comments on the issue, the Commission tentatively concluded that unvented heaters fueled by natural gas, propane and kerosene should be exempted from the Rule because all models are 100% efficient. They are not vented to the outside and, therefore, all the heat produced remains in the area being heated. In addition, compared to the other products covered by the Rule, they consume minor amounts of energy. The Commission found there is no significant difference in operating cost among similarly sized models and, therefore, that labels disclosing costs would not help consumers make purchasing decisions.¹⁵³ The Commission tentatively concluded that requiring the labeling of these products would not be economically feasible unless the cost of labeling were offset by some significant benefit to consumers.

Two comments addressed this issue. GAMA favored exempting these products.¹⁵⁴ CEC opposed an exemption, stating that the fact that there is no real difference in efficiency among these unvented space heaters is in itself an important piece of information that should be communicated to consumers.¹⁵⁵

the case of new homes, it is similarly difficult to conclude that the consumer/homebuyer never actually takes the time to at least casually inspect the water heater and thus see the water heater label." UGI, DD-26, 2.

¹⁵⁰ The Commission found that, because all these products operate with virtually the same efficiency, the cost that would be incurred by industry in implementing label disclosures could not be economically justified. The Commission determined that the cost of testing and labeling would be substantial and would increase the products' cost by about 3%. The evidence also did not indicate that labeling would enable consumers to make more informed purchasing decisions because these products are all essentially 100% efficient in producing heat and operate with little variation in energy costs. 44 FR 66466, at 66468 (Nov. 19, 1979).

¹⁵¹ 49 FR 12148 (March 28, 1984).

¹⁵² See 53 FR 22111.

¹⁵³ The Commission assumed that consumers understand that models that provide more heat cost more to operate. See 58 FR 12828.

¹⁵⁴ GAMA, D-9, 2.

¹⁵⁵ CEC, DD-23, 21.

¹³⁸ Whirlpool, D-3, 5; AHAM, D-5, 6; ARI, D-6, 2.

¹³⁹ Section 324(c)(1) (42 U.S.C. 6294(c)(1)) states that "a rule prescribed under this section shall require that each covered product in the type or class of covered products to which the rule applies bear a label which discloses . . ." (emphasis added).

¹⁴⁰ This procedure is permitted under Section 6(f) of the FTC Act (15 U.S.C. 46(f)).

¹⁴¹ See 58 FR 12826.

¹⁴² CEC, DD-23, 20.

information that should be communicated to consumers.¹⁵⁵

The Commission has the discretion to exempt unvented heaters from labeling if labeling would not be technologically or economically feasible.¹⁵⁶ The Commission finds that the cost of labeling would exceed whatever benefit that consumers may obtain from learning that all competing models of a product are about equal in efficiency. The Commission concludes, therefore, that a labeling requirement is not economically feasible, and exempts these products from the Rule.

B. Issues Not Raised in the 1988 NPR

1. Industry Proposal To Exempt Central Air Conditioners From Labeling Requirements

In responding to the 1988 NPR, one manufacturer requested that the Commission repeal the recently adopted requirement for product-specific labels on central air conditioners. In discussing this comment in the 1993 NPR, the Commission stated that its reasoning for requiring product-specific labels for central air conditioners is described in the Statement of Basis and Purpose published with the central air conditioner amendments,¹⁵⁷ and that the comment did not contain any new information to justify reconsidering the Rule's requirements in this regard.¹⁵⁸

Three comments addressed this issue. ARI favored repealing the labeling requirement, contending that consumers do not use labels in their purchasing decisions and that all that is needed is a directory listing and a generic label referring consumers to it.¹⁵⁹ CEC opposed repealing the labeling requirement because the label information is useful to consumers, to utilities with incentive rebate programs for installation of efficient equipment, and to enforcement officials.¹⁶⁰ Palmdale also described how labels on heating and cooling equipment are useful to building code inspectors.¹⁶¹

The ARI comment does not provide any new information to justify repealing the central air conditioner labeling requirements. In contrast, the CEC and Palmdale comments strongly suggest that the information on central air conditioner labels is used by the public. The Commission therefore concludes that the record supports retaining the

labeling requirement for central air conditioners.

2. Minor Revisions to the Rule

a. Descriptions of covered products. In the 1993 NPR, the Commission stated that new definitions for certain products appear in NAECA 87, and that the DOE test procedure product definitions, from which the definitions in the Rule are derived, have been amended over the years. As a result, some of the definitions of covered products in section 305.3 of the Rule are no longer up-to-date.¹⁶² In addition, DOE has approved test procedures for new product categories and has adopted minimum efficiency standards pursuant to NAECA 87.¹⁶³ Because the Commission's Rule and DOE's test procedures and standards work in tandem to regulate the products enumerated in EPCA, the Commission proposed to revise the Rule's definitions to establish as much consistency as possible with DOE's test procedures and standards to avoid confusion.

Two comments generally supported these proposed amendments to the Rule.¹⁶⁴ No comments opposed them. The Commission, therefore, has amended the definitions in accordance with the proposals in the 1993 NPR. The amended sections of the Rule describing covered products are contained in "Text of Amendments," below, at sections 305.3 (a), (b), and (e) through (i).

b. Determinations of energy usage. Section 305.5 of the Rule refers to the DOE test procedures that manufacturers must follow in determining the energy usage figures to be used in complying with the required disclosures. In the 1993 NPR, the Commission proposed amending section 305.5 to reflect that the primary disclosure of energy usage on labels for products that had disclosed estimated annual operating cost would be in terms of either kilowatt-hour use per year or energy factor, instead of estimated annual operating cost.¹⁶⁵ Only CEC commented on this, and it supported it.¹⁶⁶

The Commission is amending section 305.5 of the Rule. The section will now refer to kilowatt-hours per year, therms per year, or gallons per year because the Commission has decided to require the disclosure of energy consumption

descriptors rather than energy factors. See section 305.5 in "Text of Amendments," below.

c. Determinations of capacity. Section 305.7 of the Rule establishes the methodology for determining the capacity, or size, of covered products. This is accomplished by a general definition of capacity for each product followed by a reference to the specific section of the DOE test that contains the procedure for determining the capacity of the product. Because the DOE tests have been modified since these references were published in the Rule, many references are now incorrect. The Commission proposed, in the 1993 NPR, correcting the references in section 305.7.

Two comments supported these proposed amendments and none opposed them.¹⁶⁷ Accordingly, the Commission has amended the references as proposed in the 1993 NPR. See section 305.7 in "Text of Amendments," below.

d. Past effective dates. Since the Rule was first published in 1979, section 305.18 has itemized the effective dates for the Rule's various requirements for all the covered product categories. The effective dates for the Rule's particular reporting requirements also have appeared separately in § 305.8(a). Because of various amendments to the Rule over the years, § 305.18 and, to a lesser extent, § 305.8(a) now list many different effective dates.

In the 1993 NPR, the Commission proposed deleting § 305.18 entirely and eliminating the effective dates provisions in § 305.8(a). The Commission tentatively found that their continued inclusion in the codified version of the Rule is of questionable value, that inclusion of all these effective dates in the Code of Federal Regulations version of the Rule is optional, and that deleting them will have no substantive effect on the Rule. The actual effective dates, if of historical interest, can be found in the relevant Federal Register notices. Finally, deletion of this information will simplify the Rule and reduce printing costs. The only comment on this issue supported the proposal.¹⁶⁸ Accordingly, for the reasons previously set forth, the Commission is amending the Rule by deleting § 305.18 entirely and by eliminating the effective dates in § 305.8(a). See §§ 305.8(a), 305.18 and 305.19 (which will be renumbered 305.18) in "Text of Amendments," below.

¹⁵⁵ GAMA, D-9, 2.

¹⁵⁶ CEC, DD-23, 21.
¹⁵⁷ 42 U.S.C. 6294(a)(1) and 6294(b)(5).
¹⁵⁸ 52 FR 46888, 46891-2 (Dec. 10, 1987).
¹⁵⁹ See the discussion of Carrier's comment at 58 FR 12828.

¹⁶⁰ ARI, D-6, 1.

¹⁶¹ CEC, DD-23, 21.

¹⁶² See 58 FR 12829.

¹⁶³ CEC, DD-23, 3, 21.

¹⁶⁴ ARI, D-6, 2; CEC, DD-23, 3, 21.

¹⁶⁵ CEC, DD-23, 25.

3. Energy Efficiency Descriptors

Currently, the Rule requires the use of the term "Energy Efficiency Rating (EER)" to describe the energy usage of room air conditioners, central air conditioners (including heat pumps), and furnaces.¹⁶⁹ The Commission adopted this single term so consumers could learn to recognize and associate it with energy efficiency measurement. The industry, however, describes the same rating with several terms based on the product category: e.g., "Energy Efficiency Ratio (EER)" for room air conditioners, "Annual Fuel Utilization Efficiency (AFUE)" for furnaces, "Seasonal Energy Efficiency Ratio (SEER)" for central air conditioners and the cooling side of heat pumps, and "Heating Seasonal Performance Factor (HSPF)" for the heating side of heat pumps. These terms also are found in the DOE test procedures.

During the 1988 NPR comment period, several comments proposed changing the Rule's use of the single term, "EER," to the terms the industry uses for each product category. The comments noted that, although the term "EER" is used on labels, fact sheets and in catalogs, the industry still uses the other terms extensively and most consumers understand them.

In the 1993 NPR, the Commission proposed amending section 305.2(i) of the Rule to permit disclosure of the descriptors that are commonly used by the industry and referenced in the DOE tests. Eight comments addressed the proposal. Five supported it.¹⁷⁰ CEC also urged that the Commission not just allow use of the industry terms, but require their use.¹⁷¹ Two comments said average consumers would not understand the industry terms.¹⁷²

The Commission is not persuaded that average consumers will be unable to understand the industry terms. In light of the general support for this proposal, the Commission has decided to adopt these instead of the term "EER." Further, the Commission has decided to follow CEC's suggestion and to mandate the use of these terms in required disclosures. This will make the Rule consistent with DOE's Minimum Efficiency Standards Rule and industry practice. See section 305.2(i) in "Text of Amendments," below.

¹⁶⁹ Section 305.2(i).

¹⁷⁰ Amana, D-1, 3; ARI, D-6, 2; WSEO, DD-9, 1; Palmdale, DD-16, 1. In supporting the proposal, GAMA opined that the industry descriptors could always have been used and that the Rule only needs to be modified to reflect this fact more clearly. GAMA, D-9, 2.

¹⁷¹ CEC, DD-23, 21-22.

¹⁷² PSCNC, DD-1, 2; Mississippi Gas, DD-4, 2.

4. New EnergyGuide Label Format

As discussed in Part IV.A.6., above, the 1993 NPR sought comment on possible alternatives to dollar energy usage figures on labels, such as energy factor or kilowatt-hour, therm, or gallon usage. In preparing proposed sample labels displaying the new descriptors for public comment, the Commission's staff determined that additional changes to the labels were necessary. Specifically, the Commission needed to add explanatory language for such terms as "energy factor" and "kilowatt-hours per year," and needed to adjust the labels' design to accommodate the disclosures proposed for clothes washers and dishwashers. Finally, consumer research conducted by DOE in 1984 and 1985 had suggested that the current label format could benefit from simplification.¹⁷³

The Commission, therefore, prepared simplified labels that were intended to be more "user-friendly." In consultation with DOE's Office of Codes and Standards, the Commission prepared three different prototype dishwasher labels—a vertical graph, a bar graph, and one that used the current horizontal graph configuration. The 1993 NPR also included a fourth label that showed the bar graph against a grid background, with the high end bar occupying the full height of the graph and with the low end bar coming up only to the first line in the grid.

The Commission conducted consumer research involving 120 shopping mall consumers on the proposed alternative labels. The study showed consumers preferred the bar graph format over the other two (as well as over the current, dual-disclosure label). The Commission placed the results of the study on the rulemaking record to aid the public in commenting on the proposed labels.¹⁷⁴

In an effort to understand better how consumers perceive, understand and use information on energy efficiency, the 1993 NPR asked: how would "energy factor" and "kilowatt-hour use per year" be perceived and understood by consumers; what fuel cost figures and what fuel cost figure intervals would be appropriate in the cost grids on labels for certain appliances; how easy is it for consumers to use the cost grids to compare the relative costs of alternative products; and, would the costs to industry of newly designed labels be justified by the improvement in communication. The Commission also asked whether the Rule's dimension requirements for labels

should be changed and for other suggestions for improving label design.

The Commission has divided the discussion of the format of EnergyGuide labels into two issues: format of the primary disclosure, and cost grids.

a. Format of the primary disclosure. Eleven comments addressed the format change issue. Five comments indicated a preference for one or another of the proposed sample formats, thereby implicitly supporting change from the current format.¹⁷⁵ Six advocated keeping the format of required labels the same or essentially the same.¹⁷⁶

All of the comments that expressed a preference for any of the proposed sample labels favored Sample 4 (the bar graph with grids).¹⁷⁷ Speed Queen preferred the overall format of Sample 4, but suggested that the lower half of Sample 3 was preferable because it emphasized the definition of "energy factor."¹⁷⁸ ACEEE and WSEO preferred Sample 4 and suggested minor improvements.¹⁷⁹ WSEO also commented that the proposed changes to the labels are necessary to improve their usefulness, and that the costs of the improvements will probably be low compared to the benefits.¹⁸⁰ USEPA preferred Sample 4 because of the cross grids behind the bar graph and found it the easiest to read and understand.¹⁸¹

Whirlpool commented that the present horizontal format has been in use for the past 13 years with no adverse consumer feedback that would indicate misunderstanding or confusion about the ranges of comparability. It further noted that maintaining consistency with the present format would reduce costs to manufacturers and, ultimately, to consumers. It also would reduce confusion and the need for reeducation among retail salespeople and consumers.¹⁸² Whirlpool, Maytag and AHAM asked that the EnergyGuide

¹⁷⁵ Amana, D-1, 3; Speed Queen, D-8, 2; ACEEE, DD-8, 1; WSEO, DD-9, 1-2; USEPA, DD-12, 1.

¹⁷⁶ Whirlpool, D-3, 5; AHAM, D-5, 10-11; ARI, D-6, 2; GAMA, D-9, 2; Mississippi Gas, DD-4, 4; Texas Gas, DD-15, 5-6.

¹⁷⁷ Amana, D-1, 3 ("no objection to the Sample 4"); Speed Queen, D-8, 2; ACEEE, DD-8, 1; WSEO, DD-9, 1-2; USEPA, DD-12, 1.

¹⁷⁸ Speed Queen, D-8, 2 (the comment noted that the definition would not be necessary if kWh/cycle were used instead of energy factor).

¹⁷⁹ ACEEE appeared to recommend omitting the definition of "energy factor" from the bar graph box. DD-8, 2. WSEO suggested rearrangement of some of the wording on the label and use of "kilowatt-hour," rather than "kilowatt." DD-9, 2-3.

¹⁸⁰ WSEO DD-9, 3.

¹⁸¹ USEPA, DD-12, 1.

¹⁸² Whirlpool, D-3, 5.

¹⁷³ See DOE materials at B-1 through B-3.

¹⁷⁴ See B-4.

format be consistent with the Canadian EnergyGuide label format.¹⁸³

AHAM opposed any format changes except to the extent necessary to accommodate new energy usage descriptors because consumers have become accustomed to reading the existing EnergyGuide labels.¹⁸⁴ AHAM suggested, however, as did Whirlpool, that the format be changed slightly to allow for flexibility in size so labels could range between 5.25 and 5.50 inches in width, which would include the presently required 5 1/8" width specification. According to Whirlpool, this would provide some latitude to allow for minor variations in printing operations.¹⁸⁵

Speed Queen asked that labels not become larger, because the present size specifications optimize the number of labels that can be printed from a sheet of paper stock.¹⁸⁶ Amana, Maytag, and AHAM requested that the final label format be printable with manufacturers' existing printing systems.¹⁸⁷ ARI and GAMA commented that, if labels are to be required, they should remain the same because none of the proposed new formats would provide any significant, cost-justifiable benefits.¹⁸⁸

The Commission has determined not to make major changes in the format of the primary energy usage disclosure on EnergyGuides except those that are necessary because the Commission is amending the Rule to require the use of new energy usage descriptors. The Commission also is eliminating cost grids from labels for refrigerators, refrigerator-freezers, freezers, water heaters, clothes washers, dishwashers, and room air conditioners. See the discussions in Parts IV.A.6. b. and c., above and IV.B.4.b., below. Consumers are familiar with the current horizontal bar format, which has been in use for twelve years. The Commission also has concluded that the record is inconclusive about the need for and advantages of a different format for presentation of the primary energy usage disclosure.¹⁸⁹ Finally, retaining

the existing horizontal format of the primary disclosure has the advantage of continued consistency with Canada's EnergyGuide labels.¹⁹⁰

Within the context of the existing horizontal bar format, however, the Commission is making certain changes to make the labels simpler and more "user-friendly." The Commission proposed many of these changes as part of the Sample Labels in the 1993 NPR.¹⁹¹

Specifically, to simplify the appearance of the labels overall, the Commission has removed all text from the labels above the "EnergyGuide" logo and moved the phrase "Based on standard U.S. Government tests" from its present location under the horizontal bar so it appears as the only text immediately below the EnergyGuide logo. The Commission has increased the size of the type of this phrase so consumers can clearly see that the energy usage information is based on government standards.¹⁹² The Commission also has changed the arrangement of the text on the labels somewhat to maximize the use of the free space resulting from the elimination of the cost grids and the references to cost calculation that accompanied them (discussed in Part IV.B.4.b., below.)

In addition, to emphasize to consumers that the information on the

labels is for use in comparative shopping (rather than to provide exact energy usage of the appliance in the home), the Commission has added the headline "Compare the [Energy Use or Energy Efficiency] of this [Product] with Others Before You Buy."

The Commission recognizes that, at least at first, the energy consumption descriptors on the amended labels may not be as familiar to consumers as the estimated annual dollar operating cost figures on the current labels have been, and that the product-specific efficiency descriptors may also seem unfamiliar. For each energy consumption descriptor (kWh/year, therms per year, and gallons per year) and energy efficiency descriptor (EER, SEER, AFUE, and HSPF), therefore, the Commission will require that the labels include a simple definition.

Finally, the Commission also is amending slightly the size requirements for the labels in section 305.11(a)(1) of the Rule to permit some flexibility in the label's width, as requested by AHAM and Whirlpool. This accommodates the needs of the industry and will have a *de minimis* effect on label size consistency.

The above-described modifications are reflected in the amended Sample Labels in "Text of Amendments," below.

b. *Cost grids.* Labels for refrigerators, refrigerator-freezers and freezers, dishwashers, clothes washers, water heaters, and room air conditioners currently contain cost grids to enable consumers to estimate the annual operating cost of the product based on their own utility rates. In the 1993 NPR, the Commission proposed that the amended labels contain similar, although simpler, cost grids. One element of these cost grids would be a range of costs for the fuel used by the product (electricity, natural gas, etc.). The Commission asked what cost figures and what intervals between the cost figures would be appropriate. The Commission asked in particular how easy it is for consumers to use the cost grid to compare the relative costs of alternative products. Although the Commission did not propose eliminating cost grids from the labels, the Commission asked for suggestions for improving the design of the proposed labels.

Ten comments addressed these questions. Four supported the continued use of cost grids, some suggesting minor modifications.¹⁹³ The

¹⁸³ See comments on this subject from Amana, D-1, 3; Whirlpool, D-3, 5; Maytag, D-4, 3-4; AHAM, D-5, 2, 8-9; ARI, D-6, 3; Speed Queen, D-8, 2; GAMA, D-9, 3. With their comments, AHAM and Maytag provided copies of a marketing research study conducted by the Canadian Government's Ministry of Energy, Mines and Resources ("EMR") summarizing and discussing focus group interviews used to test consumer comprehension of alternative energy label formats. EMR conducted the study in connection with revisions to Canada's "EnergyGuide" labels for appliances. Consumers were exposed to alternative formats of labels disclosing three measures of energy usage—energy efficiency, operating cost, or energy consumption.

The study indicated that a simple and clear disclosure of energy consumption, in the form of kilowatt-hours per year, was the easiest for consumers to understand. Labels disclosing estimated annual operating cost or energy efficiency seemed to be more confusing. The study also showed consumer preference for energy usage disclosure on a scale measuring from "low" on the left to "high" on the right.

The revised label format that will be issued for final comment by EMR discloses energy usage in the form of estimated annual energy consumption (in kWh/yr.) over a horizontal bar showing the energy usage range, with color shading increases in intensity from left to right as energy consumption increases. The energy consumption of the labeled appliance is indicated with a pointer located at the appropriate position on the scale.

¹⁹¹ See proposed Sample Labels 1-4 at 58 FR 12847-50.

¹⁹² One of the findings in the DOE-sponsored assessment of DOE's Appliance Labeling Rule consumer education program was that labels must display more clearly the government's role in the tests for the labeling program to have more credibility. B-3, 35.

¹⁸⁴ Whirlpool, D-3, 5; Maytag, D-4, 4-5; AHAM, D-5, 11-12. The Canadian label, which was provided in Attachments to both Maytag's and AHAM's comments, is based on a horizontal scale similar to the current EnergyGuide label.

¹⁸⁵ AHAM, D-5, 11.

¹⁸⁶ AHAM, D-5, 10-11; Whirlpool, D-3, 5.

¹⁸⁷ Speed Queen, D-8, 2.

¹⁸⁸ Amana, D-1, 3; Maytag, D-4, 3; AHAM, D-5, 12. None of these comments, however, provided any specific information on how to assure this.

¹⁸⁹ ARI, D-6, 2; GAMA, D-9, 2.

¹⁹⁰ See comments of PSCNC, who questioned making decisions on the basis of such a small consumer survey (DD-1, 1-2) and Mississippi Gas, whose own consumer study suggests that the Commission should conduct further study in its development of an effective energy label (DD-4, 4).

¹⁹³ ACEEE, DD-8, 1-2; WSEO, DD-9, 2; Texas Gas, DD-15, 4; CEC, DD-23, 24.

other six ranged from questioning the need for cost grids to recommending that they be eliminated from all labels.¹⁹⁴

ACEEE commented that the cost grids, as shown on Sample Labels 1-4, are well-designed and useful to the consumer. The comment, however, suggested standardizing the ranges of costs for electricity and gas on labels for all products, so every label would show the same fuel cost numbers (and intervals between them) on the grids.¹⁹⁵ WSEO said the grids are helpful and simple and agreed with the cost figures and the intervals between them.¹⁹⁶ Texas Gas commented that the cost grids are most useful for making cross-fuel comparisons and that the grids on water heater labels should be expanded to show annual energy costs for operation of the water heater on electricity, gas, and oil, regardless of what fuel the labeled product actually uses.¹⁹⁷ CEC stated that the 1993 NPR cost grids are adequate.¹⁹⁸

Amana commented that cost grids are inappropriate for climate control products because of the complexity of calculating heating and cooling loads. Amana was concerned that large increments in energy cost values on cost grids, caused by label space constraints, could confuse consumers who have trouble calculating the costs. Amana stated that Canada's energy label for refrigerators has for years disclosed kWh/year with no cost grids.¹⁹⁹

Whirlpool stated that the grids only approximate annual operating cost, while kWh/cycle or kWh/year, in conjunction with local rates, would provide precise cost figures. It recommended replacing the grids with instructions on how to consult with a local utility company and to calculate the annual operating cost based on kWh/cycle or kWh/year.²⁰⁰ Maytag also recommended eliminating cost grids from all labels, contending that they complicate the message of the label and make it less likely to be used by consumers. Also, according to Maytag, the grids are redundant because it is obvious that the more kilowatt-hours of

energy consumed, the more costly the operation of the product will be.²⁰¹

AHAM, while supporting the existing EnergyGuide format in general, encouraged the Commission to eliminate cost grids from the labels. AHAM cited a DOE study referenced in the 1993 NPR indicating that consumers rarely use cost grids and often consider them to contain extraneous information.²⁰² AHAM also contended that eliminating the grids would further harmonize the Commission's EnergyGuide labels with Canada's EnerGuide.²⁰³

EGIA commented that the cost grids are confusing to customers and, therefore, confusing to salespeople.²⁰⁴ Laclede Gas, in opposing the use of energy factors on water heater labels, noted that the inclusion of simplified cost grids would not be sufficient to overcome the distorted information provided by the energy factor disclosure.²⁰⁵

The Commission's authority to require cost grids is derived from section 324(c)(5) of EPCA.²⁰⁶ This section permits, but does not direct, the Commission to require additional information on labels relating to energy consumption if the Commission determines that such information would assist consumers in making purchasing decisions and would not be unduly burdensome to manufacturers. Therefore, the Commission has the authority to eliminate cost grids from labels if it no longer believes that they will assist consumers in making purchasing decisions.

Some industry members contended that consumers often find that the cost grids are confusing and detract from the basic message of the labels.²⁰⁷ As explained earlier, other amendments the Commission is adopting will provide consumers with energy consumption information that can be readily converted to provide the labeled product's operating cost. Specifically, the Commission's adoption of estimated annual energy consumption disclosures for refrigerators, refrigerator-freezers,

freezers, water heaters, clothes washers, and dishwashers makes cost grids on labels for those products unnecessary because the information they provide will now be available by multiplying the energy consumption figure by an appropriate cost per kWh, therm or gallon.²⁰⁸ Accordingly, the Commission has determined to eliminate cost grids from labels for these products.

The Commission believes, however, that consumers may want and benefit from a simplified direct disclosure of estimated annual operating cost. Therefore, the Commission will now require, on labels for refrigerators, refrigerator-freezers, freezers, clothes washers, dishwashers, and water heaters, a statement that shows the operating costs for the labeled product derived using the DOE annual average cost for electricity, natural gas, propane, or heating oil, as appropriate. This will provide consumers with an estimate, for purposes of comparison, of the product's energy usage expressed as an operating cost. The statement will identify the specific costs per unit for the appropriate fuel and the year DOE published it. Because the statement will not include operating cost ranges of comparability, however, the Commission will require updating of these cost figures only in connection with label changes occasioned by the publication of revisions to the energy consumption ranges that must appear with the primary energy consumption disclosure. The statement will read as follows:

[Products] using more energy cost more to operate. This model's estimated yearly operating cost is:

[Cost figure will be boxed] Based on a [Year] U.S. Government national average cost of \$_____ per [kWh, therm, or gallon] for [electricity, natural gas, propane, or oil]. Your actual operating cost will vary depending on your local utility rates and your use of the product.²⁰⁹

The primary energy usage disclosure on the current labels for room air conditioners is an energy efficiency figure identified as an "energy efficiency ratio (EER)" in the

¹⁹⁴ Maytag, D-4, 2.

¹⁹⁴ Amana, D-1, 3; Whirlpool, D-3, 4; Maytag, D-4, 3; AHAM, D-5, 11; Laclede Gas, DD-20, 1-5; EGIA, DD-21, 2.

¹⁹⁵ ACEEE, DD-8, 1-2.

¹⁹⁶ WSEO, DD-9, 2. WSEO noted, however, that the cost grids are not the most important part of the label.

¹⁹⁷ Texas Gas, DD-15, 4.

¹⁹⁸ CEC, DD-23, 24.

¹⁹⁹ Amana, D-1, 3. Canada's soon-to-be-revised EnerGuide labels are not likely to require cost grids on labels for any covered product categories. See Attachments to comments from Maytag and AHAM.

²⁰⁰ Whirlpool, D-3, 4.

²⁰² See the 1993 NPR at 58 FR 12829 and B-2, 38-39. The same discussion in the DOE study also includes the opinions of some consumers who favored the cost grids.

²⁰³ AHAM, D-5, 11.

²⁰⁴ EGIA, DD-21, 2.

²⁰⁵ Laclede Gas, DD-20, 4. The comment was in opposition to the proposal to require energy factors on water heater labels, supplemented by a cost grid to enable consumers to estimate the annual operating cost of the products based on local utility rates.

²⁰⁶ 42 U.S.C. 6294(c)(5).

²⁰⁷ See Maytag, D-4, 2; AHAM, D-5, 11; EGIA, DD-21/2.

²⁰⁸ See Parts IV.A.6.a., b., and c., above.

²⁰⁹ For clothes washers and dishwashers, the statement will read: [Product]s using more energy cost more to operate. This model's estimated yearly operating cost is:

[Electric cost figure will be boxed] when used with an electric water heater

[Gas cost figure will be boxed] when used with a natural gas water heater

Based on a [Year] U.S. Government national average cost of \$_____ per kWh for electricity, and \$_____ per therm for natural gas. Your actual operating cost will vary depending on your local utility rates and your use of the product.

industry.²¹⁰ The labels also must disclose a cost grid based on different costs per kWh for electricity and different hours of use per year of the product. Like the cost grids on current labels for the products just discussed, these cost grids are complicated and occupy a significant amount of label space. Although they are not being amended to disclose an energy consumption descriptor like the amended labels for these other products, the Commission believes that, as with the other labels, room air conditioner labels would benefit by replacement of the cost grids with the operating cost statement, and is amending the Rule to that effect. The space on all these labels that was previously occupied by the cost grids and text references to cost will be available for the remaining text of the labels, which will be presented in a cleaner, more readable format.²¹¹

To implement the elimination of cost grids from labels, the Commission is amending the Sample Labels for refrigerators, refrigerator-freezers, freezers, clothes washers, dishwashers, water heaters, and room air conditioners. The Commission also is amending the Appendices that pertain to these categories to delete the cost grid materials there contained (see Appendices A1-F in "Text of Amendments," below) as well as the section of the Rule that requires cost grids to be on labels for these products (see section 305.11(a)(5)(i)(H) in "Text of Amendments," below.)

V. Miscellaneous Issues

Several comments submitted in response to the 1993 NPR raised issues that the Commission has not identified for comment, or were related only indirectly to the proposals in the NPR. These issues are discussed below.

A. Effective Date

AHAM and ARI requested, without elaboration, that the Commission allow six months until the amendments become effective.²¹² Section 324 of EPCA provides that a labeling rule must take effect not later than three months after the date it is prescribed, except that the effective date can be extended to six months if the Commission determines that such extension is necessary to allow adequate time for compliance.²¹³ Because of the nature and extent of the amendments being

announced today, and in view of the request by the two trade associations, the Commission finds that the six-month period is necessary to allow those who are subject to the Rule to come into compliance with the amendments. The effective date of these amendments, therefore, will be six months from the date of their publication in the Federal Register.

B. Central Air Conditioner Labeling

ARI requested that the Commission amend the Rule to require manufacturers of split-system central air conditioners and the evaporator coils (sometimes sold separately) that are a part of them to base their representations of energy usage on the DOE test procedures.²¹⁴ ARI also suggested that certain disclosures on central air conditioner labels be amended.²¹⁵ The Commission believes that soliciting public comment on the proposal in the Federal Register may be required before imposing such an amendment.²¹⁶ The Commission will take these suggestions under advisement for future amendments.

C. Cost Grids and Furnace Labeling

ACEEE made several suggestions pertaining to figures and disclosures for use on cost grids.²¹⁷ Because the Commission is eliminating cost grids from labels on refrigerators, refrigerator-freezers, freezers, clothes washers, dishwashers, water heaters, and room air conditioners, these suggestions are no longer relevant. ACEEE also provided an alternative Heat Loss Table for use with the Appendices pertaining to furnaces.²¹⁸ The Commission cannot modify the Heat Loss Tables, however, because they are provided by DOE as a part of the test procedure for furnaces.²¹⁹

²¹⁴ ARI, D-6, 3-4. Split system central air conditioners consist of a condensing unit, which is usually installed outside, and an evaporator coil, which is installed in the duct work inside the house. These two parts can be purchased from the same manufacturer or from two different manufacturers.

²¹⁵ ARI asked that the text on central air conditioner labels be changed to eliminate, from the following statement, the assertion that ratings may vary "slightly": "This energy rating is based on U.S. Government standard tests of this condenser model combined with the most common coil. The rating will vary slightly with different coils and in different geographic regions." ARI also asked that the statement suggest that consumers contact dealers for the actual efficiency rating of the purchased combination.

²¹⁶ 42 U.S.C. 6306(a)(1).

²¹⁷ ACEEE, DD-8, 1-3. For example, ACEEE suggested a map showing regional zones for room air conditioners similar to the map used for central air conditioners.

²¹⁸ *Id.*, at 3.

²¹⁹ 42 U.S.C. 324(c)(1).

D. Water Use Disclosures

USEPA suggested that the Rule be expanded to include a disclosure of the water-use efficiency of appliances that use water.²²⁰ Because EPCA does not give the Commission the authority to require such disclosures, the Commission cannot expand the Rule as USEPA requests. In a related matter, however, the Commission recently has amended the Rule to require disclosure of the water use of certain plumbing products, in accordance with a directive in the Energy Policy Act of 1992.²²¹

E. Data Submissions, Ranges of Comparability, and Testing

CEC suggested specific revisions to three sections of the Rule. First, CEC suggested that section 305.8 be amended so required submissions of data could be made to the Commission "or its designated representative."²²² Second, CEC requested adding language to section 305.9 that would give the Commission the authority to change the ranges of comparability in circumstances other than when the range limits change by more than 15%.²²³ Third, CEC proposed several changes to section 305.16, which relates to required testing by designated laboratories for enforcement purposes. CEC stated that the section should clarify whether "no more than two" samples must be tested and should provide for verification testing without the notice and reverification procedures currently in the section, and that the Commission should not pay for the tests when they are required.²²⁴

The Commission appreciates CEC's suggestions. However, before adopting any such amendments, the Commission would need to solicit public comment on them. The Commission will take these suggestions under advisement for possible future amendment proceedings.

VI. Metric Usage

Section 205b of the Metric Conversion Act, as amended by the Omnibus Trade and Competitiveness Act, states that the metric measurement system is the preferred system of weights and measures in the United States.²²⁵ It also requires federal agencies to use the metric system in all procurements, grants and other business-related activities (which include rulemakings), except to the extent that such use is impractical or is likely to cause

²²⁰ USEPA, DD-12, 1-2.

²²¹ See 58 FR 54955 (Oct. 25, 1993).

²²² CEC, DD-23, 27-28.

²²³ *Id.*, 28.

²²⁴ *Id.*, 28-30, j.

²²⁵ 15 U.S.C. 205b.

²¹⁰ See the discussion of the Commission's adoption of industry terms for required energy efficiency descriptors in Part IV.B.3., above.

²¹¹ See the discussion of the text of the labels in Part IV.B.4.a., above.

²¹² AHAM, D-5, 14; ARI, D-6, 5.

²¹³ 42 U.S.C. 6294(b)(4).

significant inefficiencies or loss of markets to United States firms. Because of its general support of the policy stated in the Omnibus Trade and Competitiveness Act, the Commission solicited comment, in the 1993 NPR, on three areas of the Rule (described below) with a potential for the use of metric terms—either in place of or in addition to inch-pound measurements.

First, the Commission asked whether section 305.11(a) of the Rule should specify the dimensions of the required EnergyGuides in metric or dual terms, or remain unchanged. Second, the Commission solicited comment on whether the Rule should require that the capacity descriptors for covered products be expressed in metric or dual terms.²²⁶ Manufacturers must annually submit to the Commission energy efficiency data on their products, based on DOE tests, that are categorized on the basis of these capacity descriptors. These data then form the basis for the ranges of comparability on the EnergyGuides. See section 305.8 of the Rule. The Commission asked whether to leave the present requirements unchanged, or to require the reports to the Commission and/or the disclosures on the EnergyGuides to be in metric or in dual terms. Third, the cost grids currently required on EnergyGuides for clothes washers, dishwashers, and water heaters show, as one factor of the grid, a fuel cost expressed in terms of kilowatt-hours for electricity, therms for natural gas, and gallons for heating oil. None of these is a completely metric term. See Appendices C, D, and F. The Commission solicited comment on whether to require metric or dual disclosures, or to leave the present requirements unchanged.

Ten comments addressed the issue of metric usage.²²⁷ Only CEC supported adopting metric or dual measurements in any of the Rule's requirements. The others recommended leaving the Rule unchanged.

CEC recommended that the dimension specifications for the labels and the capacity descriptors on labels be specified in dual terms. CEC stated that the Rule should continue to allow that submissions be made in inch-pound units because Commission staff could make the conversion to metric units

more easily after preparing ranges of comparability. On cost grids, CEC recommended keeping kWh without inch-pound equivalents, and requiring that therms and gallons be disclosed with their metric equivalents.²²⁸

Amana, Speed Queen and Texas Gas opposed amending the label dimension specifications.²²⁹ Amana contended that there is no benefit to metric dimensioning, and Speed Queen stated that metric or dual dimensions would most likely conflict with printing industry standards for type font sizing and spacing.²³⁰

Most of the comments that opposed requiring label disclosures in metric or dual units stated that the labels with metric or dual disclosures would be cluttered and complicated,²³¹ would confuse consumers,²³² and would be less "consumer-friendly," contrary to the Commission's goals in revising label format.²³³ GAMA contended that consumers would not understand metric terms and that the DOE tests do not use them. GAMA further stated that a dual disclosure requirement would make the already full GAMA Directory confusing and unwieldy.²³⁴ ACEEE stated that dual or metric disclosures would educate consumers as to metric measurements but confuse them as to energy usage and complicate the labels.²³⁵

Four comments contended that requirements to submit or disclose capacities in metric or dual terms would be place a burden on the industry, although none quantified the burden.²³⁶ AHAM and Texas Gas declared that a change to metric or dual disclosures would be burdensome, and Amana predicted that the use of dual terms would add time to the preparation of data submissions.²³⁷ ARI stated that requiring submissions in metric terms would defeat the purpose of permitting industry efficiency descriptors (such as "AFUE" and "SEER"), and that showing information on labels in metric terms

would be a burden on industry that would not benefit consumers.²³⁸

The Commission has determined that requiring manufacturers to disclose label information in metric terms could cause significant inefficiencies by confusing consumers. As ACEEE stated, such a requirement may raise consumers' awareness of metric terms, but at the expense of the basic purpose of the labeling program—effective communication of energy usage of labeled products. The Commission also has concluded that dual disclosures would unacceptably complicate labels. Because the Rule will not require metric or dual disclosures on labels, the Commission is not requiring submissions in those terms.

To support the policy articulated in the Metric Conversion Act, the Commission is amending section 305.11(a)(1) of the Rule to have it express the dimensions of the labels in inch-pound and metric units. The Commission is leaving unchanged the font, type-point-size and pica specifications in the sample labels that show them, however, because they are for use only by the printing industry in setting up and producing the labels and because there are no direct metric equivalents for them.²³⁹

VII. Regulatory Flexibility Act

In the 1988 NPR, the Commission concluded, on a preliminary basis, that an initial regulatory flexibility analysis was not necessary for the proposed amendments to the Rule because the amendments, if promulgated, would not have a significant economic impact on a substantial number of small entities.²⁴⁰ The Commission stated that its conclusion was based on information presently available and requested comment on the subject. No comments were received on this issue.

In the 1993 NPR, the Commission again sought comment on this issue. No comments were received. Accordingly, the Commission has no reason to believe that the amendments it is adopting will have a significant economic impact on a substantial number of small entities.

First, the amendments relating to energy usage disclosures for furnaces will not have a significant impact because the two proposed changes are likely to offset each other in terms of

²²⁶ CEC, DD-23, 25-26.

²²⁷ Amana, D-1, 4; Speed Queen, D-8, 1; Texas Gas, DD-15.5-6.

²²⁸ Amana, D-1, 4; Speed Queen, D-8, 1.

²²⁹ ARI, D-6, 2; ACEEE, DD-8, 2; Texas Gas, DD-15, 5-6; Laclede Gas, DD-20, 6.

²³⁰ ARI, D-6, 2; Speed Queen, D-8, 1; ACEEE, DD-8, 2; Laclede Gas, DD-20, 6.

²³¹ Whirlpool, D-3, 6; Speed Queen, D-8, 1; ACEEE, DD-8, 2.

²³² GAMA, D-9, 2-3.

²³³ ACEEE, DD-8, 2.

²³⁴ Amana, D-1, 4; AHAM, D-5, 13; ARI, D-6, 2-3; Texas Gas, DD-15, 5.

²³⁵ AHAM, D-5, 13; Texas Gas, DD-15, 5; Amana, D-1, 4.

²³⁶ ARI, D-6, 2-3. See discussion of industry efficiency descriptors at Part IV.B.3., above.

²³⁷ The Commission could require that the dimensions of the printed areas of the labels and the type size specifications be expressed in millimeters.

²³⁸ See Regulatory Flexibility Act, 5 U.S.C. 603-605; see also 53 FR 22113.

²²⁶ Currently, section 305.7 of the Rule requires that the capacity descriptors for some products be in inch-pound measurement: cubic feet for refrigerators, refrigerator-freezers and freezers, Btu's for climate control products, and first hour rating in gallons for water heaters.

²²⁷ Amana, D-1, 4; Whirlpool, D-3, 6; AHAM, D-5, 12-13; ARI, D-6, 2-3; Speed Queen, D-8, 1; GAMA, D-9, 2-3; ACEEE, DD-8, 2; Texas Gas, DD-15, 5-6; Laclede Gas, DD-20, 6; CEC, DD-23, 25-26.

cost and burden. To the extent that manufacturers will have to prepare the product-specific labels, instead of the labels presently required, they will incur somewhat greater administrative and printing expenses. This will be offset, to some extent, because they will be able to disclose required information in an industry directory instead of preparing fact sheets. Overall, the Commission expects that most firms, regardless of size, will experience a reduction of expense primarily because of lower printing costs.

Second, the amendments relating to the creation of new range sub-categories for furnaces, room air conditioners, clothes washers, refrigerators, refrigerator-freezers, and freezers will not have a significant economic impact. The amendments will impose few, if any, additional costs. In addition, these products would now be categorized in accordance with the subdivisions in DOE's minimum efficiency standards program, making it administratively easier for the affected organizations, which will no longer be required to comply with two sets of similar, but inconsistent, regulations.

Finally, the amendments relating to the use of a different label format and different energy usage descriptors on labels will not have a significant economic impact. Although there will be a small initial cost in changing current labels, the cost is likely to be offset in future years because fewer annual label changes are likely to be required with the use of the new descriptors which, unlike current dollar descriptors, will not be subject to annual changes.

Because it appears, on the basis of evidence presently available, that these changes will not be likely to have a significant economic impact on a substantial number of small entities within the meaning of the Regulatory Flexibility Act and its implementing regulation, the Commission concludes that a final regulatory flexibility analysis is unnecessary. In light of the above, the Commission certifies, under the provisions of Section 5 of the Regulatory Flexibility Act, that the amendments it is adopting today will not have a significant economic impact on a substantial number of small entities.²⁴¹

VIII. Paperwork Reduction Act

In the 1988 NPR, the Commission stated that the Rule contains disclosure and reporting requirements that constitute "information collection requirements" as defined by 5 C.F.R. 1320.7(c), the regulation that

implements the Paperwork Reduction Act ("PRA").²⁴² The Commission noted that the Rule had been reviewed and approved in 1984 by the Office of Management and Budget ("OMB") and assigned OMB Control No. 3084-0068. Since the 1988 NPR was published, the Supreme Court has determined that agency regulations requiring disclosures to third parties are not subject to the PRA.²⁴³ OMB has again reviewed the Rule and extended its approval for its recordkeeping and reporting requirements until February 28, 1996. The amendments now being adopted do not alter the recordkeeping or reporting requirements and, therefore, do not require further OMB clearance.

List of Subjects in 16 CFR Part 305

Advertising, Energy conservation, Household appliances, Incorporation by reference, Labeling, Reporting and recordkeeping requirements, Water conservation.

For the reasons set forth in the preamble, 16 CFR is amended as follows:

Text of Amendments

PART 305—RULE CONCERNING DISCLOSURES REGARDING ENERGY CONSUMPTION AND WATER USE OF CERTAIN HOME APPLIANCES AND OTHER PRODUCTS REQUIRED UNDER THE ENERGY POLICY AND CONSERVATION ACT ("APPLIANCE LABELING RULE")

1. Part 305 is amended by revising the heading to read as set forth above.
2. The authority citation for part 305 continues to read as follows:

Authority: 42 U.S.C. 6294.

3. Sections 305.2 (h) through (j) are revised to read as follows:

§ 305.2 Definitions.

(h) *Estimated annual energy consumption and estimated annual operating cost.* (1) *Estimated annual energy consumption* means the energy or (for products described in sections 305.3(k)-(n)) water that is likely to be consumed annually in representative use of a consumer product, as determined in accordance with tests prescribed under section 323 of the Act (42 U.S.C. 6293).

(i) *Kilowatt-hour use per year, or kWh/yr.*, means estimated annual energy consumption expressed in kilowatt-hours of electricity.

²⁴² 44 U.S.C. 3501-3520.

²⁴³ *Dole v. United Steelworkers of America*, 494 U.S. 26 (1990).

(ii) *Therm use per year, or therms/yr.*, means estimated annual energy consumption expressed in therms of natural gas.

(iii) *Gallon use per year, or gallons/yr.*, means estimated annual energy consumption expressed in gallons of propane or No. 2 heating oil.

(2) *Estimated annual operating cost* means the aggregate retail cost of the energy that is likely to be consumed annually in representative use of a consumer product, as determined in accordance with tests prescribed under section 323 of the Act (42 U.S.C. 6293).

(i) *Energy efficiency rating* means the following product-specific energy usage descriptors: "annual fuel utilization efficiency (AFUE)" for furnaces; "energy efficiency ratio (EER)" for room air conditioners; "seasonal energy efficiency ratio (SEER)" for the cooling function of central air conditioners and heat pumps; and, "heating seasonal performance factor (HSPF)" for the heating function of heat pumps, as all four descriptors are determined in accordance with tests prescribed under section 323 of the Act (42 U.S.C. 6293). These product-specific energy usage descriptors shall be used in satisfying all the requirements of this part.

(j) *Range of estimated annual energy consumption* means the range of estimated annual energy consumption per year of all models within a designated range of comparability.

4. Sections 305.3 (a) and (b) are revised to read as follows:

§ 305.3 Description of covered products to which this part applies.

(a) *Refrigerators and refrigerator-freezers.* (1) *Electric refrigerator* means a cabinet designed for the refrigerated storage of food at temperatures above 32 °F., and having a source of refrigeration requiring single phase, alternating current electric energy input only. An electric refrigerator may include a compartment for the freezing and storage of food at temperatures below 32 °F., but does not provide a separate low temperature compartment designed for the freezing and storage of food at temperatures below 8 °F. An "all-refrigerator" is an electric refrigerator which does not include a compartment for the freezing and long time storage of food at temperatures below 32 °F (0.0 °C). An "all-refrigerator" may include a compartment of 0.50 cubic capacity (14.2 liters) or less for the freezing and storage of ice.

(2) *Electric refrigerator-freezer* means a cabinet which consists of two or more compartments with at least one of the compartments designed for the

²⁴¹ 5 U.S.C. 605(b).

refrigerated storage of food at temperatures above 32 °F. and with at least one of the compartments designed for the freezing and storage of food at temperatures below 8 °F. which may be adjusted by the user to a temperature of 0 °F. or below. The source of refrigeration requires single phase, alternating current electric energy input only.

(b) *Freezer* means a cabinet designed as a unit for the freezing and storage of food at temperatures of 0 °F. or below, and having a source of refrigeration requiring single phase, alternating current electric energy input only.

5. Section 305.3 is amended by adding paragraph (c)(1) and reserving paragraph (c)(2) to read as follows:

§ 305.3 Description of covered products to which this part applies.

(c) * * *

(1) *Water Heating Dishwasher* means a dishwasher which is designed for heating cold inlet water (nominal 50 °F.) or a dishwasher for which the manufacturer recommends operation with a nominal inlet water temperature of 120 °F. and may operate at either of these inlet water temperatures by providing internal water heating to above 120 °F. in at least one wash phase of the normal cycle.

6. Section 305.3(e) is revised to read as follows:

§ 305.3 Description of covered products to which this part applies.

(e) *Room air conditioner* means a consumer product, other than a packaged terminal air conditioner, which is powered by a single phase electric current and which is an encased assembly designed as a unit for mounting in a window or through the wall for the purpose of providing delivery of conditioned air to an enclosed space. It includes a prime source of refrigeration and may include a means for ventilating and heating.

7. Section 305.3(f) introductory text is revised to read as follows:

§ 305.3 Description of covered products to which this part applies.

(f) *Clothes washer* means a consumer product designed to clean clothes, utilizing a water solution of soap and/or detergent and mechanical agitation or other movement, and must be one of the following classes: automatic clothes

washers, semi-automatic clothes washers, and other clothes washers.

8. Section 305.3(g) is revised to read as follows:

§ 305.3 Description of covered products to which this part applies.

(g) *Furnaces*. (1) *Furnace* means a product which utilizes only single-phase electric current, or single-phase electric current or DC current in conjunction with natural gas, propane, or home heating oil, and which—

(i) Is designed to be the principal heating sources for the living space of a residence;

(ii) Is not contained within the same cabinet with a central air conditioner whose rated cooling capacity is above 65,000 Btu per hour;

(iii) Is an electric central furnace, electric boiler, forced-air central furnace, gravity central furnace, or low pressure steam or hot water boiler; and

(iv) Has a heat input rate of less than 300,000 Btu per hour for electric boilers and low pressure steam or hot water boilers and less than 225,000 Btu per hour for forced-air central furnaces, gravity central furnaces, and electric central furnaces.

(2) *Electric central furnace* means a furnace designed to supply heat through a system of ducts with air as the heating medium, in which heat is generated by one or more electric resistance heating elements and the heated air is circulated by means of a fan or blower.

(3) *Forced air central furnace* means a gas or oil burning furnace designed to supply heat through a system of ducts with air as the heating medium. The heat generated by combustion of gas or oil is transferred to the air within a casing by conduction through heat exchange surfaces and is circulated through the duct system by means of a fan or blower.

(4) *Gravity central furnace* means a gas fueled furnace which depends primarily on natural convection for circulation of heated air and which is designed to be used in conjunction with a system of ducts.

(5) *Electric boiler* means an electrically powered furnace designed to supply low pressure steam or hot water for space heating application. A low pressure steam boiler operates at or below 15 pounds per square inch gauge (psig) steam pressure; a hot water boiler operates at or below 160 psig water pressure and 250 °F. water temperature.

(6) *Low pressure steam or hot water boiler* means an electric, gas or oil burning furnace designed to supply low pressure steam or hot water for space

heating application. A low pressure steam boiler operates at or below 15 pounds psig steam pressure; a hot water boiler operates at or below 160 psig water pressure and 250 °F. water temperature.

(7) *Outdoor furnace or boiler* is a furnace or boiler normally intended for installation out-of-doors or in an unheated space (such as an attic or a crawl space).

(8) *Weatherized warm air furnace or boiler* means a furnace or boiler designed for installation outdoors, approved for resistance to wind, rain, and snow, and supplied with its own venting system.

9. Section 305.3(h) introductory text and paragraph (h)(3) are revised, and paragraphs (h) (4) and (5) are added, to read as follows:

§ 305.3 Description of covered products to which this part applies.

(h) *Central air conditioner* means a product, other than a packaged terminal air conditioner, which is powered by single phase electric current, air cooled, rated below 65,000 Btu per hour, not contained within the same cabinet as a furnace, the rated capacity of which is above 225,000 Btu per hour, and is a heat pump or a cooling only unit.

(3) *Evaporator coil* means a component of a central air conditioner which is designed to absorb heat from an enclosed space and transfer the heat to a refrigerant.

(4) *Single package unit* means any central air conditioner in which all the major assemblies are enclosed in one cabinet.

(5) *Split system* means any central air conditioner in which one or more of the major assemblies are separate from the others.

10. Section 305.3(i) is revised to read as follows:

§ 305.3 Description of covered products to which this part applies.

(i) *Heat pump* means a product, other than a packaged terminal heat pump, which consists of one or more assemblies, powered by single phase electric current, rated below 65,000 Btu per hour, utilizing an indoor conditioning coil, compressor, and refrigerant-to-outdoor air heat exchanger to provide air heating, and may also provide air cooling, dehumidifying, humidifying, circulating, and air cleaning.

11. The section heading and the introductory text of paragraph (a) of § 305.5 are revised to read as follows:

§ 305.5 Determinations of estimated annual energy consumption, estimated annual operating cost, and energy efficiency rating, and of water use rate.

(a) Procedures for determining the estimated annual energy consumption, the estimated annual operating costs, the energy efficiency ratings and the efficacy factors of covered products are those found in 10 CFR Part 430, Subpart B, in the following sections:

12. Section 305.7 is revised to read as follows:

§ 305.7 Determinations of capacity.

The capacity of covered products shall be determined as follows:

(a) *Refrigerators and refrigerator-freezers.* The capacity shall be the total refrigerated volume (VT) in cubic feet, rounded to the nearest one-tenth of a cubic foot, as determined according to Appendix A1 to 10 CFR Part 430, Subpart B.

(b) *Freezers.* The capacity shall be the total refrigerated volume (VT) in cubic feet, rounded to the nearest one-tenth of a cubic foot, as determined according to Appendix B1 to 10 CFR Part 430, Subpart B.

(c) *Dishwashers.* The capacity shall be the place-setting capacity, determined according to Appendix C to 10 CFR Part 430, Subpart B.

(d) *Water heaters.* The capacity shall be the first hour rating, as determined according to Appendix E to 10 CFR Part 430, Subpart B.

(e) *Room air conditioners.* The capacity shall be the cooling capacity in Btu's per hour, as determined according to Appendix F to 10 CFR Part 430, Subpart B, but rounded to the nearest value ending in hundreds that will satisfy the relationship that the value of EER used in representations equals the rounded value of capacity divided by the value of input power in watts. If a value ending in hundreds will not satisfy this relationship, the capacity may be rounded to the nearest value ending in 50 that will.

(f) *Clothes washers.* The capacity shall be the tub capacity, rounded to the nearest gallon, as determined according to Appendix J to 10 CFR Part 430, Subpart B, in the terms "standard" or "compact" as defined in Appendix J.

(g) *Furnaces.* The capacity shall be the heating capacity in Btu's per hour, rounded to the nearest 1,000 Btu's per hour, as determined according to Appendix N to 10 CFR Part 430, Subpart B.

(h) *Central air conditioners, cooling.* The capacity shall be the cooling capacity in Btu's per hour, as determined according to Appendix M to 10 CFR Part 430, Subpart B, rounded to the nearest 100 Btu's per hour for capacities less than 20,000 Btu's per hour; to the nearest 200 Btu's per hour for capacities between 20,000 and 37,999 Btu's per hour; and to the nearest 500 Btu's per hour for capacities between 38,000 and 64,999 Btu's per hour.

(i) *Central air conditioners, heating.* The capacity shall be the heating capacity in Btu's per hour, as determined according to Appendix M to 10 CFR Part 430, Subpart B, rounded to the nearest 100 Btu's per hour for capacities less than 20,000 Btu's per hour; to the nearest 200 Btu's per hour for capacities between 20,000 and 37,999 Btu's per hour; and to the nearest 500 Btu's per hour for capacities between 38,000 and 64,999 Btu's per hour.

(j) *Fluorescent lamp ballasts.* The capacity shall be the ballast input voltage, as determined according to Appendix Q to 10 CFR Part 430, Subpart B.

13. Section 305.8(a)(1) is revised to read as follows:

§ 305.8 Submission of data.

(a)(1) Each manufacturer of a covered product (except manufacturers of fluorescent lamp ballasts, showerheads, faucets, water closets or urinals) shall submit annually to the Commission a report listing the estimated annual energy consumption (for refrigerators, refrigerator-freezers, freezers, clothes washers, dishwashers and water heaters) or the energy efficiency rating (for room air conditioners, central air conditioners, heat pumps and furnaces) for each basic model in current production, determined according to § 305.5 and statistically verified according to § 305.6. The report must also list, for each basic model in current production: the model numbers for each basic model; the total energy consumption, determined in accordance with § 305.5, used to calculate the estimated annual energy consumption or energy efficiency rating; the number of tests performed; and, its capacity, determined in accordance with § 305.7. For those models that use more than one energy source or more than one cycle, each separate amount of energy consumption or energy cost, measured in accordance with § 305.5, shall be listed in the report. Appendix J illustrates a suggested reporting format. Starting serial numbers or other numbers identifying the date of

manufacture of covered products shall be submitted whenever a new basic model is introduced on the market.

* * * * *

§ 305.9 [Amended]

14. Section 305.9(b) is amended by removing the second sentence.

15. Section 305.10 is revised to read as follows:

§ 305.10 Ranges of estimated annual energy consumption and energy efficiency ratings.

(a) The range of estimated annual energy consumption or energy efficiency ratings for each covered product (except fluorescent lamp ballasts, showerheads, faucets, water closets or urinals) shall be taken from the appropriate appendix to this rule in effect at the time the labels are affixed to the product. The Commission shall publish revised ranges annually in the *Federal Register*, if appropriate, or a statement that the specific prior ranges are still applicable for the new year. Ranges will be changed if the estimated annual energy consumption or energy efficiency ratings of the products within the range change in a way that would alter the upper or lower estimated annual energy consumption or energy efficiency rating limits of the range by 15% or more from that previously published. When a range is revised, all information disseminated after 90 days following the publication of the revision shall conform to the revised range. Products that have been labeled prior to the effective date of a modification under this section need not be relabeled.

(b) When the estimated annual energy consumption or energy efficiency rating of a given model of a covered product falls outside the limits of the current range for that product, which could result from the introduction of a new or changed model, the manufacturer shall

(1) Omit placement of such product on the scale, and

(2) Add one of the two sentences below, as appropriate, in the space just below the scale, as follows:

The estimated annual energy consumption of this model was not available at the time the range was published.

The energy efficiency rating of this model was not available at the time the range was published.

16. In § 305.11, paragraphs (a)(1), (2), (3) and (4)(i) are revised to read as follows:

§ 305.11 Labeling for covered products.

(a) *Labels for covered products other than fluorescent lamp ballasts, showerheads, faucets, water closets and urinals—(1) Layout.* All energy labels

for each category of covered product shall use one size, similar colors and typefaces with consistent positioning of headline, copy and charts to maintain uniformity for immediate consumer recognition and readability. Trim size dimensions for all labels shall be as follows: width must be between 5 1/4 inches and 5 1/2 inches (13.34 cm. and 13.97 cm.); length must be 7 3/4 inches (18.73 cm.). Copy is to be set between 27 picas and 29 picas and copy page should be centered (right to left and top to bottom). Depth is variable but should follow closely the prototype labels appearing at the end of this part illustrating the basis layout. All positioning, spacing, type sizes and line widths should be similar to and consistent with the prototype labels.

(2) *Type style and setting.* The Helvetica Condensed series typeface or equivalent shall be used exclusively on the label. Specific sizes and faces to be used are indicated on the prototype labels. No hyphenation should be used in setting headline or copy text. Positioning and spacing should follow the prototypes closely. Generally, text must be set flush left with two points leading except where otherwise indicated. Helvetica Condensed Regular shall be used for all copy except the large number indicating the estimated annual energy consumption or energy efficiency rating, which shall be in Helvetica Condensed Black, and all other numerals and letters used in immediate connection with the Energy Efficiency Scale, which shall be in Helvetica Condensed Bold. See the prototype labels for specific directions.

(3) *Colors.* The basic colors of all labels shall be process yellow or equivalent and process black. The label shall be printed full bleed process yellow. All type and graphics shall be print process black.

(4) *Paper stock—(i) Adhesive labels.* All adhesive labels should be applied so they can be easily removed without the use of tools or liquids, other than water, but should be applied with an adhesive with an adhesion capacity sufficient to prevent their dislodgment during normal handling throughout the chain of distribution to the retailer or consumer. The paper stock for pressure-sensitive or other adhesive labels shall have a basic weight of not less than 58 pounds per 500 sheets (25" x 38") or equivalent, exclusive of the release liner and adhesive. A minimum peel adhesion capacity for the adhesive of 12 ounces per square inch is suggested, but not required if the adhesive can otherwise meet the above standard. The pressure-sensitive adhesive shall be applied in no fewer than two strips not

less than 0.5 inches (1.27 cm.) wide. The strips shall be within 0.25 inches (.64 cm.) of the opposite edges of the label. For a "flap-tag" label, the pressure-sensitive adhesive shall be applied in one strip not less than 0.5 inches (1.27 cm.) wide. The strip shall be within 0.25 inches (.64 cm.) of the top edge of the label.

* * * * *

§ 305.11 [Amended]

17. Section 305.11(a)(5)(i)(A) is amended by removing the second sentence.

18. In § 305.11, paragraphs (a)(5)(i)(E) through (H) and (J) are revised to read as follows:

§ 305.11 Labeling for covered products.

(a) * * *

(5) * * *

(i) * * *

(E) Estimated annual energy consumption for refrigerators, refrigerator-freezers, freezers, clothes washers, dishwashers and water heaters and energy efficiency ratings for room air conditioners are as determined in accordance with § 305.5.

(F) Ranges of comparability and of estimated annual energy consumption and energy efficiency ratings, as applicable, are found in the appropriate appendices accompanying this part.

(G) Placement of the labeled product on the scale shall be proportionate to the lowest and highest estimated annual energy consumption or energy efficiency ratings forming the scale.

(H) Labels must contain a statement disclosing the product's estimated annual operating cost derived using the DOE National Average Representative Unit Cost for the appropriate fuel that was current when the label was printed. The statement must disclose the specific cost per unit for the fuel and the year DOE published it.

(I) For refrigerators, refrigerator-freezers, freezers, and water heaters, the statement will read as follows (fill in the blanks with the appropriate appliance name, the operating cost, the year, and the energy cost figures):

⌞[Refrigerators, or Freezers, or Water Heaters] using more energy cost more to operate.

This model's estimated yearly operating cost is: [Cost figure will be boxed] Based on a [Year] U.S. Government national average cost of \$ _____ per [kWh, therm, or gallon] for [electricity, natural gas, propane, or oil]. Your actual operating cost will vary depending on your local utility rates and your use of the product.

(2) For clothes washers and dishwashers, the statement will read as follows (fill in the blanks with the

appropriate appliance name, the operating cost, the number of loads per week, the year, and the energy cost figures):

[Clothes Washers, or Dishwashers] using more energy cost more to operate.

This model's estimated yearly operating cost is: [Electric cost figure will be boxed] when used with an electric water heater [Gas cost figure will be boxed] when used with a natural gas water heater.

Based on [6 washloads a week for dishwashers, or 8 washloads a week for clothes washers], a [Year] U.S. Government national average cost of \$ _____ per kWh for electricity, and \$ _____ per therm for natural gas. Your actual operating cost will vary depending on your local utility rates and your use of the product.

(3) For room air conditioners, the statement will read as follows (fill in the blanks with the appropriate operating cost, the year, and the energy cost figures):

More efficient air conditioners cost less to operate.

This model's estimated yearly operating cost is: [Cost figure will be boxed] Based on a [Year] U.S. Government national average cost of \$ _____ per kWh for electricity. Your actual operating cost will vary depending on your local utility rates and your use of the product.

(J) A statement that the estimated annual energy consumption and energy efficiency ratings, as applicable, are based on U.S. Government standard tests is required on all labels, as indicated in the prototype labels.

19. In § 305.11, paragraphs (a)(5)(ii) (C) through (E) are revised and paragraphs (a)(5)(ii) (F) through (L) are added to read as follows:

§ 305.11 Labeling for covered products.

(a) * * *

(5) * * *

(ii) * * *

(C) The annual fuel utilization efficiency for furnaces is determined in accordance with § 305.5.

(D) Each furnace label shall contain a generic range consisting of the lowest and highest annual fuel utilization efficiencies for all furnaces that utilize the same energy source.

(E) Placement of the labeled product on the scale shall be proportionate to the lowest and highest annual fuel utilization efficiency ratings forming the scale.

(F) The following statement shall appear on the label beneath the range(s) in bold print:

Federal law requires the seller or installer of this appliance to make available a fact sheet or directory giving further information regarding the efficiency and operating cost of this equipment. Ask for this information.

(G) A statement that the annual fuel utilization efficiency ratings are based on U.S. Government standard tests is required on all labels.

(H) The following statement shall appear at the bottom of the label:

IMPORTANT: REMOVAL OF THIS LABEL BEFORE CONSUMER PURCHASE IS A VIOLATION OF FEDERAL LAW (42 U.S.C. 6302).

(I) No marks or information other than specified in this part shall appear on or directly adjoining this label except for a part or publication number identification, as desired by the manufacturer. The identification number shall be in the lower right-hand corner of the label, and characters shall be in 6 point type or smaller.

(J) Manufacturers of boilers that are shipped without jackets must label their products with hang-tags that also have adhesive backing on them that complies with the specifications contained in § 305.11(a)(4).

(K) Manufacturers of boilers shipped with more than one input nozzle to be installed in the field must label such boilers with the AFUE of the system when it is set up with the nozzle that results in the lowest annual fuel utilization efficiency rating.

(L) Manufacturers that ship out boilers that may be set up as either steam or hot water units must label the boilers with the AFUE rating derived by conducting the required test on the boiler as a hot water unit.

20. The first two sentences of § 305.11(a)(5)(iii)(C) introductory text are revised to read as follows:

§ 305.11 Labeling for covered products.

- (a) * * *
- (5) * * *
- (iii) * * *

(C) The seasonal energy efficiency ratio for the cooling function of central air conditioners is determined in accordance with § 305.5. For the heating function, the heating seasonal performance factor shall be calculated for heating Region IV for the standardized design heating requirement nearest the capacity measured in the High Temperature Test in accordance with § 305.5. * * *

21. Section 305.11(a)(5)(iii)(D) is revised to read as follows:

§ 305.11 Labeling for covered products.

- (a) * * *
- (5) * * *
- (iii) * * *

(D)(1) Each cooling only central air conditioner label shall contain a generic

range consisting of the lowest and highest seasonal energy efficiency ratios for all cooling only central air conditioners.

(2) Each heat pump label, except as noted in paragraph (a)(5)(iii)(D)(3) of this section, shall contain two generic ranges. The first range shall consist of the lowest and highest seasonal energy efficiency ratios for the cooling side of all heat pumps. The second range shall consist of the lowest and highest heating seasonal performance factors for the heating side of all heat pumps.

(3) Each heating only heat pump label shall contain a generic range consisting of the lowest and highest heating seasonal performance factors for all heating only heat pumps.

22. Sections 305.11(a)(5)(iii)(G) (1) through (3) are revised to read as follows:

§ 305.11 Labeling for covered products.

- (a) * * *
- (5) * * *
- (iii) * * *
- (G) * * *

(1) For labels disclosing the seasonal energy efficiency ratio for cooling, the statement should read:

This energy rating is based on U.S. Government standard tests of this condenser model combined with the most common coil. The rating may vary slightly with different coils.

(2) For labels disclosing both the seasonal energy efficiency ratio for cooling and the heating seasonal performance factor for heating, the statement should read:

This energy rating is based on U.S. Government standard tests of this condenser model combined with the most common coil. The rating will vary slightly with different coils and in different geographic regions.

(3) For labels disclosing the heating seasonal performance factor for heating, the statement should read:

This energy rating is based on U.S. Government standard tests of this condenser model combined with the most common coil. The rating will vary slightly with different coils and in different geographic regions. Central air conditioner labels disclosing the efficiency ratings for specific condenser/coil combinations do not have to contain any of the above three statements. They must contain only the general disclosure that the energy costs and efficiency ratings are based on U.S. Government tests.

23. Section 305.11(b)(3)(vi) is revised to read as follows:

§ 305.11 Labeling for covered products.

- (b) * * *
- (3) * * *

(b) * * *

(3) * * *

(vi) Ranges of comparability and of energy efficiency ratings are found in section 1 of the appropriate appendices accompanying this part.

24. Sections 305.11(b)(3)(x) (A) through (C) are revised to read as follows:

§ 305.11 Labeling for covered products.

- (b) * * *
- (3) * * *
- (x) * * *

(A) For fact sheets disclosing the seasonal energy efficiency ratio for cooling, the statement should read:

This energy rating is based on U.S. Government standard tests of this condenser model combined with the most common coil. The rating may vary slightly with different coils.

(B) For fact sheets disclosing both the seasonal energy efficiency ratio for cooling and the heating seasonal performance factor for heating, the statement should read:

This energy rating is based on U.S. Government standard tests of this condenser model combined with the most common coil. The rating will vary slightly with different coils and in different geographic regions.

(C) For fact sheets disclosing the heating seasonal performance factor for heating, the statement should read:

This energy rating is based on U.S. Government standard tests of this condenser model combined with the most common coil. The rating will vary slightly with different coils and in different geographic regions.

25. In § 305.11, paragraphs (c) introductory text and (c)(1) are revised, and paragraph (c)(3)(vi) is added to read as follows:

§ 305.11 Labeling for covered products.

- (c) * * *

(c) Manufacturers of furnaces and central air conditioners may elect to disseminate information regarding the efficiencies and costs of operation of their products by means of a directory or similar publication, rather than on fact sheets, provided the publication meets the following criteria:

(1) *Distribution.*

(i) It must be distributed to substantially all retailers and assemblers of central air conditioners and furnaces selling or assembling models listed in the directory.

(ii) It must be made available at cost to all other interested parties.

- (3) *Contents.* * * *

(vi) Ranges of comparability and of energy efficiency ratings are found in Section 1 of the appropriate appendices accompanying this part.

26. Section 305.13 is revised to read as follows:

§ 305.13 Promotional material displayed or distributed at point of sale.

(a)(1) Any manufacturer, distributor, retailer or private labeler who prepares printed material for display or distribution at point of sale concerning a covered product (except fluorescent lamp ballasts, showerheads, faucets, water closets or urinals) shall clearly and conspicuously include in such printed material the following required disclosure:

Before purchasing this appliance, read important information about its estimated annual energy consumption or energy efficiency rating that is available from your retailer.

(2) Any manufacturer, distributor, retailer or private labeler who prepares printed material for display or distribution at point of sale concerning a covered product that is a fluorescent lamp ballast to which standards are applicable under section 325 of the Act, shall disclose conspicuously in such printed material, in each description of such fluorescent lamp ballast, an encircled capital letter "E".

(3) Any manufacturer, distributor, retailer or private labeler who prepares printed material for display or distribution at point of sale concerning a covered product that is a showerhead, faucet, water closet, or urinal shall clearly and conspicuously include in such printed material the product's water use, expressed in gallons and liters per minute (gpm/Lpm) or per cycle (gpc/Lpc) or gallons and liters per flush (gpf/Lpf), as specified in § 305.11(e).

(b) This section shall not apply to:

(1) Written warranties.

(2) Use and care manuals, installation instructions, or other printed material containing primarily post-purchase information for the purchaser.

(3) Printed material containing only the identification of a covered product,

pricing information and/or non-energy related representations concerning that product.

(4) Any printed material distributed prior to the effective date listed in § 305.4(e).

27. Section 305.14 is revised to read as follows:

§ 305.14 Catalogs.

(a) Any manufacturer, distributor, retailer, or private labeler who advertises in a catalog a covered product (except fluorescent lamp ballasts, showerheads, faucets, water closets or urinals) shall include in such catalog, on each page that lists the covered product, the following information required to be disclosed on the label:

(1) The capacity of the model.

(2) The estimated annual energy consumption for refrigerators, refrigerator-freezers, freezers, clothes washers, dishwashers and water heaters.

(3) The energy efficiency rating for room air conditioners, central air conditioners, and furnaces.

(4) The range of estimated annual energy consumption or energy efficiency ratings, which shall be those that are current at the closing date for printing or the printing deadline of the catalog.

(b) Any manufacturer, distributor, retailer, or private labeler who advertises fluorescent lamp ballasts that are "covered products," as defined in § 305.2(o), and to which standards are applicable under section 325 of the Act, in a catalog, from which they may be purchased by cash, charge account or credit terms, shall disclose conspicuously in such catalog, in each description of such fluorescent lamp ballasts, a capital letter "E" printed within a circle.

(c) Any manufacturer, distributor, retailer, or private labeler who advertises a covered product that is a showerhead, faucet, water closet or urinal in a catalog, from which it may be purchased, shall include in such catalog, on each page that lists the covered product, the product's water use, expressed in gallons and liters per minute (gpm/Lpm) or per cycle (gpc/

Lpc) or gallons and liters per flush (gpf/Lpf) as specified in § 305.11(e).

28. Section 305.16 is revised to read as follows:

§ 305.16 Required testing by designated laboratory.

Upon notification by the Commission or its designated representative, a manufacturer of a covered product shall supply, at the manufacturer's expense, no more than two of each model of each product to a laboratory, which will be identified by the Commission or its designated representative in the notice, for the purpose of ascertaining whether the estimated annual energy consumption, the estimated annual operating cost, or the energy efficiency rating disclosed on the label or fact sheet or in an industry directory, or, as required in a catalog, or the representation made by the label that the product is in compliance with applicable standards in section 325 of the Act, 42 U.S.C. 6295, is accurate. Such a procedure will only be followed after the Commission or its staff has examined the underlying test data provided by the manufacturer as required by § 305.15(b) and after the manufacturer has been afforded the opportunity to reverify test results from which the estimated annual energy consumption, the estimated annual operating cost, or the energy efficiency rating for each basic model was derived. A representative designated by the Commission shall be permitted to observe any reverification procedures required by this part, and to inspect the results of such reverification. The Commission will pay the charges for testing by designated laboratories.

§ 305.18 [Removed]

29. Section 305.18 is removed.

§ 305.19 [Redesignated as § 305.18]

30. Section 305.19 is redesignated as § 305.18.

31. Appendices A1 and A2 to part 305 are revised; Appendices A3 through A8 are added; Appendix B is removed; and Appendices B1 through B3 are added, to read as follows:

APPENDIX A1 TO PART 305—REFRIGERATORS WITH AUTOMATIC DEFROST
[Range Information]

Manufacturer's rated total refrigerated volume in cubic feet	Range of estimated annual energy consumption (kWh/yr.)	
	Low	High
Less than 2.5		
2.5 to 4.4		
4.5 to 6.4		
6.5 to 8.4		
8.5 to 10.4		
10.5 to 12.4		
12.5 to 14.4		
14.5 to 16.4		
16.5 and over		

APPENDIX A2 to PART 305—REFRIGERATORS AND REFRIGERATOR-FREEZERS WITH MANUAL DEFROST
[Range Information]

Manufacturer's rated total refrigerated volume in cubic feet	Range of estimated annual energy consumption (kWh/yr.)	
	Low	High
Less than 2.5		
2.5 to 4.4		
4.5 to 6.4		
6.5 to 8.4		
8.5 to 10.4		
10.5 to 12.4		
12.5 to 14.4		
14.5 to 16.4		
16.5 to 18.4		
18.5 to 20.4		
20.5 to 22.4		
22.5 to 24.4		
24.5 to 26.4		
26.5 to 28.4		
28.5 and over		

APPENDIX A3 TO PART 305—REFRIGERATOR-FREEZERS WITH PARTIAL AUTOMATIC DEFROST
[Range Information]

Manufacturer's rated total refrigerated volume in cubic feet	Range of estimated annual energy consumption (kWh/yr.)	
	Low	High
Less than 10.5		
10.5 to 12.4		
12.5 to 14.4		
14.5 to 16.4		
16.5 to 18.4		
18.5 to 20.4		
20.5 to 22.4		
22.5 to 24.4		
24.5 to 26.4		
26.5 to 28.4		
28.5 and over		

APPENDIX A4 TO PART 305—REFRIGERATOR-FREEZERS WITH AUTOMATIC DEFROST WITH TOP-MOUNTED FREEZER WITHOUT THROUGH-THE-DOOR ICE SERVICE
[Range Information]

Manufacturer's rated total refrigerated volume in cubic feet	Range of estimated annual energy consumption (kWh/yr.)	
	Low	High
Less than 10.5		
10.5 to 12.4		

**APPENDIX A4 TO PART 305—REFRIGERATOR-FREEZERS WITH AUTOMATIC DEFROST WITH TOP-MOUNTED FREEZER
WITHOUT THROUGH-THE-DOOR ICE SERVICE—Continued**
[Range Information]

Manufacturer's rated total refrigerated volume in cubic feet	Range of estimated annual energy consumption (kWh/yr.)	
	Low	High
12.5 to 14.4		
14.5 to 16.4		
16.5 to 18.4		
18.5 to 20.4		
20.5 to 22.4		
22.5 to 24.4		
24.5 to 26.4		
26.5 to 28.4		
28.5 and over		

**APPENDIX A5 to Part 305—Refrigerator-Freezers With Automatic Defrost With Side-Mounted Freezer Without
Through-the-Door Ice Service**
[Range Information]

Manufacturer's rated total refrigerated volume in cubic feet	Range of estimated annual energy consumption (kWh/yr.)	
	Low	High
Less than 10.5		
10.5 to 12.4		
12.5 to 14.4		
14.5 to 16.4		
16.5 to 18.4		
18.5 to 20.4		
20.5 to 22.4		
22.5 to 24.4		
24.5 to 26.4		
26.5 to 28.4		
28.5 and over		

**APPENDIX A6 TO PART 305—REFRIGERATOR-FREEZERS WITH AUTOMATIC DEFROST WITH BOTTOM-MOUNTED FREEZER
WITHOUT THROUGH-THE-DOOR ICE SERVICE**
[Range Information]

Manufacturer's rated total refrigerated volume in cubic feet	Range of estimated annual energy consumption (kWh/yr.)	
	Low	High
Less than 10.5		
10.5 to 12.4		
12.5 to 14.4		
14.5 to 16.4		
16.5 to 18.4		
18.5 to 20.4		
20.5 to 22.4		
22.5 to 24.4		
24.5 to 26.4		
26.5 to 28.4		
28.5 and over		

**APPENDIX A7 TO PART 305—REFRIGERATOR-FREEZERS WITH AUTOMATIC DEFROST WITH TOP-MOUNTED FREEZER WITH
THROUGH-THE-DOOR ICE SERVICE**
[Range Information]

Manufacturer's rated total refrigerated volume in cubic feet	Range of estimated annual energy consumption (kWh/yr.)	
	Low	High
Less than 10.5		
10.5 to 12.4		
12.5 to 14.4		

APPENDIX A7 TO PART 305—REFRIGERATOR-FREEZERS WITH AUTOMATIC DEFROST WITH TOP-MOUNTED FREEZER WITH THROUGH-THE-DOOR ICE SERVICE—Continued
 [Range Information]

Manufacturer's rated total refrigerated volume in cubic feet	Range of estimated annual energy consumption (kWh/yr.)	
	Low	High
14.5 to 16.4		
16.5 to 18.4		
18.5 to 20.4		
20.5 to 22.4		
22.5 to 24.4		
24.5 to 26.4		
26.5 to 28.4		
28.5 and over		

APPENDIX A8 TO PART 305—REFRIGERATOR-FREEZERS WITH AUTOMATIC DEFROST WITH SIDE-MOUNTED FREEZER WITH THROUGH-THE-DOOR ICE SERVICE
 [Range Information]

Manufacturer's rated total refrigerated volume in cubic feet	Range of estimated annual energy consumption (kWh/yr.)	
	Low	High
Less than 10.5		
10.5 to 12.4		
12.5 to 14.4		
14.5 to 16.4		
16.5 to 18.4		
18.5 to 20.4		
20.5 to 22.4		
22.5 to 24.4		
24.5 to 26.4		
26.5 to 28.4		
28.5 and over		

APPENDIX B1 TO PART 305—UPRIGHT FREEZERS WITH MANUAL DEFROST
 [Range Information]

Manufacturer's rated total refrigerated volume in cubic feet	Range of estimated annual energy consumption (kWh/yr.)	
	Low	High
Less than 5.5		
5.5 to 7.4		
7.5 to 9.4		
9.5 to 11.4		
11.5 to 13.4		
13.5 to 15.4		
15.5 to 17.4		
17.5 to 19.4		
19.5 to 21.4		
21.5 to 23.4		
23.5 to 25.4		
25.5 to 27.4		
27.5 to 29.4		
29.5 and over		

APPENDIX B2 TO PART 305—UPRIGHT FREEZERS WITH AUTOMATIC DEFROST
 [Range Information]

Manufacturer's rated total refrigerated volume in cubic feet	Range of estimated annual energy consumption (kWh/yr.)	
	Low	High
Less than 5.5		
5.5 to 7.4		
7.5 to 9.4		

APPENDIX B2 TO PART 305—UPRIGHT FREEZERS WITH AUTOMATIC DEFROST—Continued
[Range Information]

Manufacturer's rated total refrigerated volume in cubic feet	Range of estimated annual energy consumption (kWh/yr.)	
	Low	High
9.5 to 11.4		
11.5 to 13.4		
13.5 to 15.4		
15.5 to 17.4		
17.5 to 19.4		
19.5 to 21.4		
21.5 to 23.4		
23.5 to 25.4		
25.5 to 27.4		
27.5 to 29.4		
29.5 and over		

APPENDIX B3 TO PART 305—CHEST FREEZERS AND ALL OTHER FREEZERS
[Range Information]

Manufacturer's rated total refrigerated volume in cubic feet	Range of estimated annual energy consumption (kWh/yr.)	
	Low	High
Less than 5.5		
5.5 to 7.4		
7.5 to 9.4		
9.5 to 11.4		
11.5 to 13.4		
13.5 to 15.4		
15.5 to 17.4		
17.5 to 19.4		
19.5 to 21.4		
21.5 to 23.4		
23.5 to 25.4		
25.5 to 27.4		
27.5 to 29.4		
29.5 and over		

32. Appendix C to part 305 is revised to read as follows:

Appendix C to Part 305—Dishwashers

Range Information

"Compact" includes countertop dishwasher models with a capacity of fewer than eight (8) place settings.

"Standard" includes portable or built-in dishwasher models with a capacity of eight (8) or more place settings.

Place settings shall be in accordance with Appendix C to 10 CFR Part 430, Subpart B. Load patterns shall conform to the operating normal for the model being tested.

Capacity	Range of estimated annual energy consumption (kWh/yr.)	
	Low	High
Compact		
Standard		

33. Appendices D1-D3 to Part 305 are revised to read as follows:

APPENDIX D1 TO PART 305—WATER HEATER—GAS
[Range Information]

Capacity	Range of estimated annual energy consumption (therms/yr. and gallons/yr.)			
First hour rating	Natural gas therms/yr.		Propane gal- lons/yr.	
	Low	High	Low	High
Less than 21				
21 to 24				
25 to 29				
30 to 34				
35 to 40				
41 to 47				
48 to 55				
56 to 64				
65 to 74				
75 to 86				
87 to 99				
100 to 114				
115 to 131				
Over 131				

APPENDIX D2 TO PART 305—WATER HEATER—ELECTRIC
[Range Information]

Capacity	Range of estimated annual energy consumption (kWh/yr.)	
First hour rating	Low	High
Less than 21		
21 to 24		
25 to 29		
30 to 34		
35 to 40		
41 to 47		
48 to 55		
56 to 64		
65 to 74		
75 to 86		
87 to 99		
100 to 114		
115 to 131		
Over 131		

APPENDIX D3 TO PART 305—WATER HEATER—OIL
[Range Information]

Capacity	Range of estimated annual energy consumption (gallons/yr.)	
First hour rating	Low	High
Less than 65		
65 to 74		
75 to 86		
87 to 99		
100 to 114		
115 to 131		
Over 131		

34. Appendix E to Part 305 is revised to read as follows:

APPENDIX E TO PART 305—ROOM AIR CONDITIONERS
[Range Information]

Manufacturer's rated cooling capacity in Btu's/hr.	Range of energy efficiency ratios (EERs)	
	Low	High
Without Reverse Cycle and with Louvered Sides:		
Less than 6,000 Btu		
6,000 to 7,999 Btu		
8,000 to 13,999 Btu		
14,000 to 19,999 Btu		
20,000 and more Btu		
Without Reverse Cycle and without Louvered Sides:		
Less than 6,000 Btu		
6,000 to 7,999 Btu		
8,000 to 13,999 Btu		
14,000 to 19,999 Btu		
20,000 and more Btu		
With Reverse Cycle and with Louvered Sides.		
With Reverse Cycle, without Louvered Sides.		

35. Appendix F to part 305 is revised to read as follows:

Appendix F to Part 305—Clothes Washers

Range Information

"Compact" includes all household clothes washers with a tub capacity of less than 1.6 cu. ft. or 13 gallons of water.

"Standard" includes all household clothes washers with a tub capacity of 1.6 cu. ft. or 13 gallons of water or more.

Capacity	Range of estimated annual energy consumption (kWh/yr.)	
	Low	High
Compact:		
Top Loading		
Front Loading		
Standard:		
Top Loading		
Front Loading		

36. Appendices G1 through G5 of Part 305 are revised, and Appendices G6 through G8 are added to read as follows:

APPENDIX to Part 305—FURNACES—GAS
[1. Range Information]

Manufacturer's rated heating capacities (Btu's/hr.)	Range of annual fuel utilization efficiencies (AFUE's)	
	Low	High
All Capacities		

[2. Yearly Cost Information: Cost Grid]

Cost per kilowatt hour ¹	Btu heat loss of home (see chart below)
4¢	
6¢	
8¢	
10¢	
12¢	
14¢	

¹ For charts on natural gas, oil and propane gas, substitute the following cost figures:

a. Cost per therm—10¢, 20¢, 30¢, 40¢, 50¢, 60¢.
b. Cost per gallon (oil)—76¢, 79¢, 82¢, 85¢, 88¢, 91¢, 94¢, 97¢, \$1.00.

c. Cost per gallon (propane)—35¢, 40¢, 45¢, 50¢, 55¢, 60¢.

The following table shows the heat loss values (in thousand Btu's/hr.) to be used in the cost grid:

[Heat Loss Table]

Manufacturers rated heat output of model to be labeled (Btu's per hour)	Design heat loss of model to be labeled (1,000 Btu's per hour)	Heat loss values to be used on the grid (1,000 Btu's per hour)
5,000 to 10,000	5	5
11,000 to 16,000	10	5, 10
17,000 to 25,000	15	10, 15
26,000 to 42,000	20	15, 20, 25
43,000 to 59,000	30	25, 30, 35, 40
60,000 to 76,000	40	35, 40, 45, 50
77,000 to 93,000	50	40, 45, 50, 60
94,000 to 110,000	60	50, 60, 70, 80
111,000 to 127,000	70	60, 70, 80, 90
128,000 to 144,000	80	70, 80, 90, 100
145,000 to 161,000	90	80, 90, 100, 110, 120
162,000 to 178,000	100	90, 100, 110, 120, 130
179,000 to 195,000	110	100, 110, 120, 130, 140
196,000 and over	130	120, 130, 140, 150, 160

Beside each cost in the cost grid, and below the appropriate heat loss value taken from the heat loss table, place the cost estimate for the model being labeled using the table costs in place of the national average cost and using the heat loss values in place of the design heat loss used in the table with the national average cost.

APPENDIX G2 TO PART 305—FURNACES—ELECTRIC

[1. Range Information]

Manufacturer's rated heating capacities (Btu's/hr.)	Ranges of annual fuel utilization efficiencies (AFUE's)	
	Low	High
All Capacities		

[2. Yearly Cost Information; Cost Grid]

Cost per kilowatt hour ¹	Btu heat loss of home (see chart below)
4c	
6c	
8c	
10c	
12c	
14c	

¹ For charts on natural gas, oil and propane gas, substitute the following cost figures:

a. Cost per therm—10¢, 20¢, 30¢, 40¢, 50¢, 60¢.

b. Cost per gallon (oil)—76¢, 79¢, 82¢, 85¢, 88¢, 91¢, 94¢, 97¢, \$1.00.

c. Cost per gallon (propane)—35¢, 40¢, 45¢, 50¢, 55¢, 60¢.

The following table shows the heat loss values (in thousand Btu's/hr.) to be used in the cost grid:

[Heat Loss Table]

Manufacturers' rated heat output of model to be labeled (Btu's per hour)	Design heat loss of model to be labeled (1,000 Btu's per hour)	Heat loss values to be used on the grid (1,000 Btu's per hour)
5,000 to 10,000	5	5
11,000 to 16,000	10	5, 10
17,000 to 25,000	15	10, 15
26,000 to 42,000	20	15, 20, 25

[Heat Loss Table]

Manufacturers' rated heat output of model to be labeled (Btu's per hour)	Design heat loss of model to be labeled (1,000 Btu's per hour)	Heat loss values to be used on the grid (1,000 Btu's per hour)
43,000 to 59,000	30	25, 30, 35, 40
60,000 to 76,000	40	35, 40, 45, 50
77,000 to 93,000	50	40, 45, 50, 60
94,000 to 110,000	60	50, 60, 70, 80
111,000 to 127,000	70	60, 70, 80, 90
128,000 to 144,000	80	70, 80, 90, 100
145,000 to 161,000	90	80, 90, 100, 110, 120
162,000 to 178,000	100	90, 100, 110, 120, 130
179,000 to 195,000	110	100, 110, 120, 130, 140
196,000 and over	130	120, 130, 140, 150, 160

Beside each cost in the cost grid, and below the appropriate heat loss value taken from the heat loss table, place the cost estimate for the model being labeled using the table costs in place of the national average cost and using the heat loss values in place of the design heat loss used in the table with the national average cost.

APPENDIX G3 TO PART 305—FURNACES—OIL

[1. Range Information]

Manufacturer's rated heating capacities (Btu's/hr.)	Range of annual fuel utilization efficiencies (AFUE's)	
	Low	High
All Capacities		

[2. Yearly Cost Information: Cost Grid]

Cost per kilowatt hour ¹	Btu heat loss of home (see chart below)
4¢	
6¢	
8¢	
10¢	
12¢	
14¢	

¹ For charts on natural gas, oil and propane gas, substitute the following cost figures:

- a. Cost per therm—10¢, 20¢, 30¢, 40¢, 50¢, 60¢.
 b. Cost per gallon (oil)—76¢, 79¢, 82¢, 85¢, 88¢, 91¢, 94¢, 97¢, \$1.00.
 c. Cost per gallon (propane)—35¢, 40¢, 45¢, 50¢, 55¢, 60¢.

The following table shows the heat loss values (in thousand Btu's/hr.) to be used in the cost grid:

[Heat Loss Table]

Manufacturers' rated heat output of model to be labeled (Btu's per hour)	Design heat loss of model to be labeled (1,000 Btu's per hour)	Heat loss values to be used on the grid (1,000 Btu's per hour)
5,000 to 10,000	5	5
11,000 to 16,000	10	5, 10
17,000 to 25,000	15	10, 15
26,000 to 42,000	20	15, 20, 25
43,000 to 59,000	30	25, 30, 35, 40
60,000 to 76,000	40	35, 40, 45, 50
77,000 to 93,000	50	40, 45, 50, 60
94,000 to 110,000	60	50, 60, 70, 80
111,000 to 127,000	70	60, 70, 80, 90
128,000 to 144,000	80	70, 80, 90, 100
145,000 to 161,000	90	80, 90, 100, 110, 120

[Heat Loss Table]

Manufacturers' rated heat output of model to be labeled (Btu's per hour)	Design heat loss of model to be labeled (1,000 Btu's per hour)	Heat loss values to be used on the grid (1,000 Btu's per hour)
162,000 to 178,000	100	90, 100, 110, 120, 130
179,000 to 195,000	110	100, 110, 120, 130, 140
196,000 and over	130	120, 130, 140, 150, 160

Beside each cost in the cost grid, and below the appropriate heat loss value taken from the heat loss table, place the cost estimate for the model being labeled using the table costs in place of the national average cost and using the heat loss values in place of the design heat loss used in the table with the national average cost.

APPENDIX G4 TO PART 305—MOBILE HOME FURNACES

1. [Range Information]

Manufacturer's rated heating capacities (Btu's/hr.)	Range of annual fuel utilization efficiencies (AFUE's)	
	Low	High
All Capacities.....		

[2. Yearly Cost Information: Cost Grid]

Cost per kilowatt hour ¹	Btu heat loss of home (see chart below)
4.....	
6.....	
8.....	
10.....	
12.....	
14.....	

¹ For charts on natural gas, oil and propane gas, substitute the following cost figures:

- a. Cost per therm—10-, 20-, 30-, 40-, 50-, 60-.
- b. Cost per gallon (oil)—76-, 79-, 82-, 85-, 88-, 91-, 94-, 97-, \$1.00.
- c. Cost per gallon (propane)—35-, 40-, 45-, 50-, 55-, 60-.

The following table shows the heat loss values (in thousand Btu's/hr.) to be used in the cost grid:

[Heat Loss Table]

Manufacturers' rated heat output of model to be labeled (Btu's per hour)	Design heat loss of model to be labeled (1,000 Btu's per hour)	Heat loss values to be used on the grid (1,000 Btu's per hour)
5,000 to 10,000	5	5
5,000 to 10,000	5	5
11,000 to 16,000	10	5, 10
17,000 to 25,000	15	10, 15
26,000 to 42,000	20	15, 20, 25
43,000 to 59,000	30	25, 30, 35, 40
60,000 to 76,000	40	35, 40, 45, 50
77,000 to 93,000	50	40, 45, 50, 60
94,000 to 110,000	60	50, 60, 70, 80
111,000 to 127,000	70	60, 70, 80, 90
128,000 to 144,000	80	70, 80, 90, 100
145,000 to 161,000	90	80, 90, 100, 110, 120
162,000 to 178,000	100	90, 100, 110, 120, 130
179,000 to 195,000	110	100, 110, 120, 130, 140
196,000 and over	130	120, 130, 140, 150, 160

Beside each cost in the cost grid, and below the appropriate heat loss value taken from the heat loss table, place the cost estimate for the model being labeled using the table costs in place of the national average cost and using the heat loss values in place of the design heat loss used in the table with the national average cost.

APPENDIX G5 TO PART 305—BOILERS—GAS (EXCEPT STEAM)

[1. Range Information]

Manufacturer's rated heating capacities (Btu's/hr.)	Range of annual fuel utilization efficiencies (AFUE's)	
	Low	High
All Capacities		

[2. Yearly Cost Information: Cost Grid]

Cost per kilowatt hour ¹	Btu heat loss of home (see chart below)
4¢	
6¢	
8¢	
10¢	
12¢	
14¢	

¹ For charts on natural gas, oil and propane gas, substitute the following cost figures:

- a. Cost per therm—10¢, 20¢, 30¢, 40¢, 50¢, 60¢.
 b. Cost per gallon (oil)—76¢, 79¢, 82¢, 85¢, 88¢, 91¢, 94¢, 97¢, \$1.00.
 c. Cost per gallon (propane)—35¢, 40¢, 45¢, 50¢, 55¢, 60¢.

The following table shows the heat loss values (in thousand Btu's/hr.) to be used in the cost grid:

[Heat Loss Table]

Manufacturers' rated heat output of model to be labeled (Btu's per hour)	Design heat loss of model to be labeled (1,000 Btu's per hour)	Heat loss values to be used on the grid (1,000 Btu's per hour)
5,000 to 10,000	5	5
11,000 to 16,000	10	5, 10
17,000 to 25,000	15	10, 15
26,000 to 42,000	20	15, 20, 25
43,000 to 59,000	30	25, 30, 35, 40
60,000 to 76,000	40	35, 40, 45, 50
77,000 to 93,000	50	40, 45, 50, 60
94,000 to 110,000	60	50, 60, 70, 80
111,000 to 127,000	70	60, 70, 80, 90
128,000 to 144,000	80	70, 80, 90, 100
145,000 to 161,000	90	80, 90, 100, 110, 120
162,000 to 178,000	100	90, 100, 110, 120, 130
179,000 to 195,000	110	100, 110, 120, 130, 140
196,000 and over	130	120, 130, 140, 150, 160

Beside each cost in the cost grid, and below the appropriate heat loss value taken from the heat loss table, place the cost estimate for the model being labeled using the table costs in place of the national average cost and using the heat loss values in place of the design heat loss used in the table with the national average cost.

APPENDIX G6 TO PART 305—BOILERS—GAS (STEAM)

[1. Range Information]

Manufacturer's rated heating capacities (Btu's/hr.)	Range of annual fuel utilization efficiencies (AFUE's)	
	Low	High
All capacities		

[2. Yearly Cost Information: Cost Grid]

Cost per kilowatt hour ¹	Btu heat loss of home (see chart below)
4¢	
6¢	
8¢	
10¢	
12¢	
14¢	

¹ For charts on natural gas, oil and propane gas, substitute the following cost figures:

- a. Cost per therm—10¢, 20¢, 30¢, 40¢, 50¢, 60¢.
 b. Cost per gallon (oil)—76¢, 79¢, 82¢, 85¢, 88¢, 91¢, 94¢, 97¢, \$1.00.
 c. Cost per gallon (propane)—35¢, 40¢, 45¢, 50¢, 55¢, 60¢.

The following table shows the heat loss values (in thousand Btu's/hr.) to be used in the cost grid:

[Heat Loss Table]

Manufacturers' rated heat output of model to be labeled (Btu's per hour)	Design heat loss of model to be labeled (1,000 Btu's per hour)	Heat loss values to be used on the grid (1,000 Btu's per hour)
5,000 to 10,000	5	5
11,000 to 16,000	10	5, 10
17,000 to 25,000	15	10, 15
26,000 to 42,000	20	15, 20, 25
43,000 to 59,000	30	25, 30, 35, 40
60,000 to 76,000	40	35, 40, 45, 50
77,000 to 93,000	50	40, 45, 50, 60
94,000 to 110,000	60	50, 60, 70, 80
111,000 to 127,000	70	60, 70, 80, 90
128,000 to 144,000	80	70, 80, 90, 100
145,000 to 161,000	90	80, 90, 100, 110, 120
162,000 to 178,000	100	90, 100, 110, 120, 130
179,000 to 195,000	110	100, 110, 120, 130, 140
196,000 and over	130	120, 130, 140, 150, 160

Beside each cost in the cost grid, and below the appropriate heat loss value taken from the heat loss table, place the cost estimate for the model being labeled using the table costs in place of the national average cost and using the heat loss values in place of the design heat loss used in the table with the national average cost.

APPENDIX G7 TO PART 305—BOILERS—OIL

[1. Range Information]

Manufacturer's rated heating capacities (Btu's/hr.)	Range of annual fuel utilization efficiencies (AFUE's)	
	Low	High
All Capacities		

[2. Yearly Cost Information: Cost Grid]

Cost per kilowatt hour ¹	Btu heat loss of home (see chart below)
4¢	
6¢	
8¢	
10¢	
12¢	
14¢	

¹ For charts on natural gas, oil and propane gas, substitute the following cost figures:

- a. Cost per therm—10¢, 20¢, 30¢, 40¢, 50¢, 60¢.

- b. Cost per gallon (oil)—76¢, 79¢, 82¢, 85¢, 88¢, 91¢, 94¢, 97¢, \$1.00;
 c. Cost per gallon (propane)—35¢, 40¢, 45¢, 50¢, 55¢, 60¢.

The following table shows the heat loss values (in thousand Btu's/hr.) to be used in the cost grid:

[Heat Loss Table]

Manufacturers' rated heat output of model to be labeled (Btu's per hour)	Design heat loss of model to be labeled (1,000 Btu's per hour)	Heat loss values to be used on the grid (1,000) Btu's per hour)
5,000 to 10,000	5	5
11,000 to 16,000	10	5, 10
17,000 to 25,000	15	10, 15
26,000 to 42,000	20	15, 20, 25
43,000 to 59,000	30	25, 30, 35, 40
60,000 to 76,000	40	35, 40, 45, 50
77,000 to 93,000	50	40, 45, 50, 60
94,000 to 110,000	60	50, 60, 70, 80
111,000 to 127,000	70	60, 70, 80, 90
128,000 to 144,000	80	70, 80, 90, 100
145,000 to 161,000	90	80, 90, 100, 110, 120
162,000 to 178,000	100	90, 100, 110, 120, 130
179,000 to 195,000	110	100, 110, 120, 130, 140
196,000 and over	130	120, 130, 140, 150, 160

Beside each cost in the cost grid, and below the appropriate heat loss value taken from the heat loss table, place the cost estimate for the model being labeled using the table costs in place of the national average cost and using the heat loss values in place of the design heat loss used in the table with the national average cost.

APPENDIX G8 TO PART 305—BOILERS—ELECTRIC

[1. Range Information]

Manufacturer's rated heating capacities (Btu's/hr.)	Range of annual fuel utilization efficiencies (AFUE's)	
	Low	High
All Capacities		

[2. Yearly Cost Information: Cost Grid]

Cost per kilowatt hour ¹	Btu heat loss of home (see chart below)
4¢	
6¢	
8¢	
10¢	
12¢	
14¢	

¹ For charts on natural gas, oil and propane gas, substitute the following cost figures:

- a. Cost per therm—10¢, 20¢, 30¢, 40¢, 50¢, 60¢;
 b. Cost per gallon (oil)—76¢, 79¢, 82¢, 85¢, 88¢, 91¢, 94¢, 97¢, \$1.00;
 c. Cost per gallon (propane)—35¢, 40¢, 45¢, 50¢, 55¢, 60¢.

The following table shows the heat loss values (in thousand Btu's/hr.) to be used in the cost grid:

[Heat Loss Table]

Manufacturers' rated heat output of model to be labeled (Btu's per hour)	Design heat loss of model to be labeled (1,000 Btu's per hour)	Heat loss values to be used on the grid (1,000) Btu's per hour)
5,000 to 10,000	5	5
11,000 to 16,000	10	5, 10
17,000 to 25,000	15	10, 15

[Heat Loss Table]

Manufacturers' rated heat output of model to be labeled (Btu's per hour)	Design heat loss of model to be labeled (1,000 Btu's per hour)	Heat loss values to be used on the grid (1,000 Btu's per hour)
26,000 to 42,000	20	15, 20, 25
43,000 to 59,000	30	25, 30, 35, 40
60,000 to 76,000	40	35, 40, 45, 50
77,000 to 93,000	50	40, 45, 50, 60
94,000 to 110,000	60	50, 60, 70, 80
111,000 to 127,000	70	60, 70, 80, 90
128,000 to 144,000	80	70, 80, 90, 100
145,000 to 161,000	90	80, 90, 100, 110, 120
162,000 to 178,000	100	90, 100, 110, 120, 130
179,000 to 195,000	110	100, 110, 120, 130, 140
196,000 and over	130	120, 130, 140, 150, 160

Beside each cost in the cost grid, and below the appropriate heat loss value taken from the heat loss table, place the cost estimate for the model being labeled using the table costs in place of the national average cost and using the heat loss values in place of the design heat loss used in the table with the national average cost.

37. Page 1 of the Sample Fact Sheet in Appendix H to Part 305 is revised as follows:

Appendix H to Part 305—Cooling Performance and Cost for Central Air Conditioners

[An example of a fact sheet for central air conditioners or for only the cooling function of heat pumps]

ENERGYGUIDE



Split System Central Air Conditioner (Cooling Only)

Cooling Capacity:

Models	XXX/C1	31,000 BTU/hr
	XXX/C2	31,400 BTU/hr
	YYY/C3	29,000 BTU/hr
	YYY/C6	29,400 BTU/hr

Cooling Performance:

Model XXX/C1
12.7 SEER



Energy efficiency range of all similar models

Least Efficient Model
10.0

Most Efficient Model
16.9

Model XXX/C2
12.6 SEER



Energy efficiency range of all similar models

Least Efficient Model
10.0

Most Efficient Model
16.9

Model YYY/C3
13.0 SEER



Energy efficiency range of all similar models

Least Efficient Model
10.0

Most Efficient Model
16.9

Model YYY/C6
12.9 SEER



Energy efficiency range of all similar models

Least Efficient Model
10.0

Most Efficient Model
16.9

This (or these) energy rating(s) is (or are) based on U.S. Government standard tests of this (or these) condenser model(s) combined with the most common coil(s). The ratings may vary slightly with different coils.

[This is Page 1 of Sample Fact Sheet]

38. Page 1 of the Sample Fact Sheet in Appendix I to Part 305 (down to "NATIONAL AVERAGE ANNUAL HEATING COST TABLE (\$ PER YEAR)") is revised as follows:

Appendix I to Part 305—Heating Performance and Cost for Central Air Conditioners

BILLING CODE 6750-01-P

[An example of a fact sheet showing only the heating function for heat pumps]

ENERGYGUIDE



Heating Capacity:

Models	XXX/C1	33,000 BTU/hr
	XXX/C2	35,000 BTU/hr

Heating Performance for Region IV

Model XXX/C1

7.9 HSPF

Energy efficiency range of all similar models

Least Efficient Model
6.8

Most Efficient Model
10.2

Model XXX/C2

8.9 HSPF

Energy efficiency range of all similar models

Least Efficient Model
6.8

Most Efficient Model
10.2

This (or these) energy rating(s) is (or are) based on U.S. Government standard tests of this (or these) condenser model(s) combined with the most common coil(s). The ratings will vary slightly with different coils and in different geographic regions.

[This is Page 1 of Sample Fact Sheet]

39. Section 8. of Appendix J to Part 305 is revised to read as follows:

Appendix J Part 305—Suggested Data Reporting Format

8. Estimated Annual Energy Consumption or Energy Efficiency Rating

40. Appendix K to Part 305 is revised as follows:

Appendix K to Part 305—Sample Labels

BILLING CODE 6750-01-P

All copy Helvetica Condensed Regular or Black

All copy x 28 pi.

10/12 Helv.
Cond. Reg.

Based on standard U.S. Government tests

ENERGYGUIDE

10/12 Helv.
Cond. Reg.

Refrigerator-Freezer
With Automatic Defrost
With Side-Mounted Freezer
Without Through-the-Door Ice Service

XYZ Corporation
Model ABC-W
Capacity: 23 Cubic Feet

10/12 Helv.
Cond. Reg.

**Compare the Energy Use of this Refrigerator
with Others Before You Buy.**

20/22 Helv.
Cond. Black

14/14 Helv.
Cond. Black
Req.

This Model Uses

776kWh/year

.5 pt. rule

20 pt. rule

Energy use (kWh/year) range of all similar models

Uses Least Energy
776

Uses Most Energy
1467

10' Helv.
Cond. Reg.

14' Helv.
Cond. Black

14/14 Helv.
Cond. Black

10/12 Helv.
Cond. Reg. Use
Helv. Cond. —
Black where
indicated

kWh/year (kilowatt-hours per year) is a measure of energy (electricity) use. Your utility company uses it to compute your bill. Only models with 22.5 to 24.4 cubic feet and the above features are used in this scale.

.5 pt. rule

Refrigerators using more energy cost more to operate. This model's estimated yearly operating cost is:

14/14 Helv.
Cond. Black

18' Helv. —
Cond. Black

\$64

Box:
24' tall

10/12 Helv.
Cond. Reg.

Based on a 1992 U.S. Government national average cost of 8.25¢ per kWh for electricity. Your actual operating cost will vary depending on your local utility rates and your use of the product.

6' Helv. Cond.
Reg.

Important: Removal of this label before consumer purchase is a violation of Federal law (42 U.S.C. 6302).

Prototype Label 1

All copy Helvetica Condensed Regular or Black

All copy x 28 pt.

10/12 Helv.
Cond. Reg.

Based on standard U.S. Government tests

ENERGYGUIDE

10/12 Helv.
Cond. Reg.Clothes Washer
Capacity: Standard
Top LoadingXYZ Corporation
Model(s) MR328, XL12, NAA8310/12 Helv.
Cond. Reg.**Compare the Energy Use of this Clothes Washer
with Others Before You Buy.**20/22 Helv.
Cond. BlackNumeral: 14'
Helv. Cond.**This Model Uses****873 kWh/year**14/14 Helv.
Cond. Black10' Helv.
Cond. Reg.

.5 pt. rule

20 pt. rule

Energy use (kWh/year) range of all similar models**Uses Least
Energy
267****Uses Most
Energy
1818**14' Helv.
Cond. Black14/14 Helv.
Cond. Black10/12 Helv.
Cond. Reg.
Use Helv. Cond.
Black where
indicated**kWh/year (kilowatt-hours per year)** is a measure of energy (electricity) use.
Your utility company uses it to compute your bill. Only standard size, top loading
clothes washers are used in this scale.

.5 pt. rule

**Clothes washers using more energy cost more to operate.
This model's estimated yearly operating cost is:**14/14 Helv.
Cond. Black18' Helv.
Cond. Black**\$72****\$28**Box:
24' tall

when used with an electric water heater

when used with a natural gas water heater

10/12 Helv.
Cond. Reg.10/12 Helv.
Cond. Reg.Based on eight loads of clothes a week and a 1992 U.S. Government national average cost
of 8.25¢ per kWh for electricity and 58¢ per therm for natural gas. Your actual operating
cost will vary depending on your local utility rates and your use of the product.6' Helv. Cond.
Reg.**Important: Removal of this label before consumer purchase is a violation of Federal law (42 U.S.C. 6302).**

Prototype Label 2

All copy Helvetica Condensed Regular or Black

All copy x 28 pt.

10/12 Helv. Cond. Reg. → Based on standard U.S. Government tests

ENERGYGUIDE

10/12 Helv. Cond. Reg. → Water Heater—Natural Gas
Capacity (first hour rating):
60 gallons

XYZ Corporation
Model(s) RP23,
RP 38

10/12 Helv. Cond. Reg. →

Compare the Energy Use of this Water Heater with Others Before You Buy.

20/22 Helv. Cond. Black →

14/14 Helv. Cond. Black →

.5 pt. rule →

20 pt. rule →

10/12 Helv. Cond. Reg. →

10' Helv. Cond. Reg. →

10/12 Helv. Cond. Reg. →

14/14 Helv. Cond. Black →

10/12 Helv. Cond. Black →

This Model Uses
240 therms/year

Energy use (therms/year) range of all similar models

Uses Least Energy
245

Uses Most Energy
295

The Estimated Annual Energy Consumption of this model was not available at the time the range was published.

10/12 Helv. Cond. Reg. Use Helv. Cond. Black where indicated →

.5 pt. rule →

Therms/year is a measure of energy use. Your utility company uses it to compute your bill. Only models with first hour ratings of 56 to 64 gallons are used in this scale.

14/14 Helv. Cond. Black →

Natural gas water heaters that use fewer therms/year cost less to operate. This model's estimated yearly operating cost is:

18' Helv. Cond. Black →

\$140

Box: 24' tall

10/12 Helv. Cond. Reg. →

6' Helv. Cond. Reg. →

Based on a 1992 U.S. Government national average cost of \$0.58 per therm for natural gas. Your actual operating cost will vary depending on your local utility rates and your use of the product.

Important: Removal of this label before consumer purchase is a violation of Federal law (42 U.S.C. 6302).

Prototype Label 3

All copy Helvetica Condensed Regular or Black

All copy x 28 pt.

10/12 Helv.
Cond. Reg.

Based on standard U.S. Government tests

ENERGYGUIDE

10/12 Helv.
Cond. Reg.Central Air Conditioner
Cooling Only
Split SystemXYZ Corporation
Model 12234510/12 Helv.
Cond. Reg.

**Compare the Energy Efficiency of this
Air Conditioner with Others Before You Buy.**

20/22 Helv.
Cond. Black**This Model's Efficiency****11.5 SEER**14/14 Helv.
Cond. Black

.5 pt. rule

20 pt. rule

Energy efficiency range of all similar models**Least
Efficient
10.0****Most
Efficient
16.9**14' Helv.
Cond. Black14/14 Helv.
Cond. Black10/12 Helv.
Cond. Reg.Use Helv.
Cond. Black
where indicated

SEER, the Seasonal Energy Efficiency Ratio, is the measure of energy efficiency for central air conditioners.

.5 pt. rule

**Central air conditioners with higher SEERs are more
energy efficient.**

14/14 Helv.
Cond. Black

Bullets; 7'

- This energy rating is based on U.S. Government standard tests of this condenser model combined with the most common coil. The rating may vary slightly with different coils.
- Federal law requires the seller or installer of this appliance to make available a fact sheet or directory giving further information about the efficiency and operating cost of this equipment. Ask for this information.

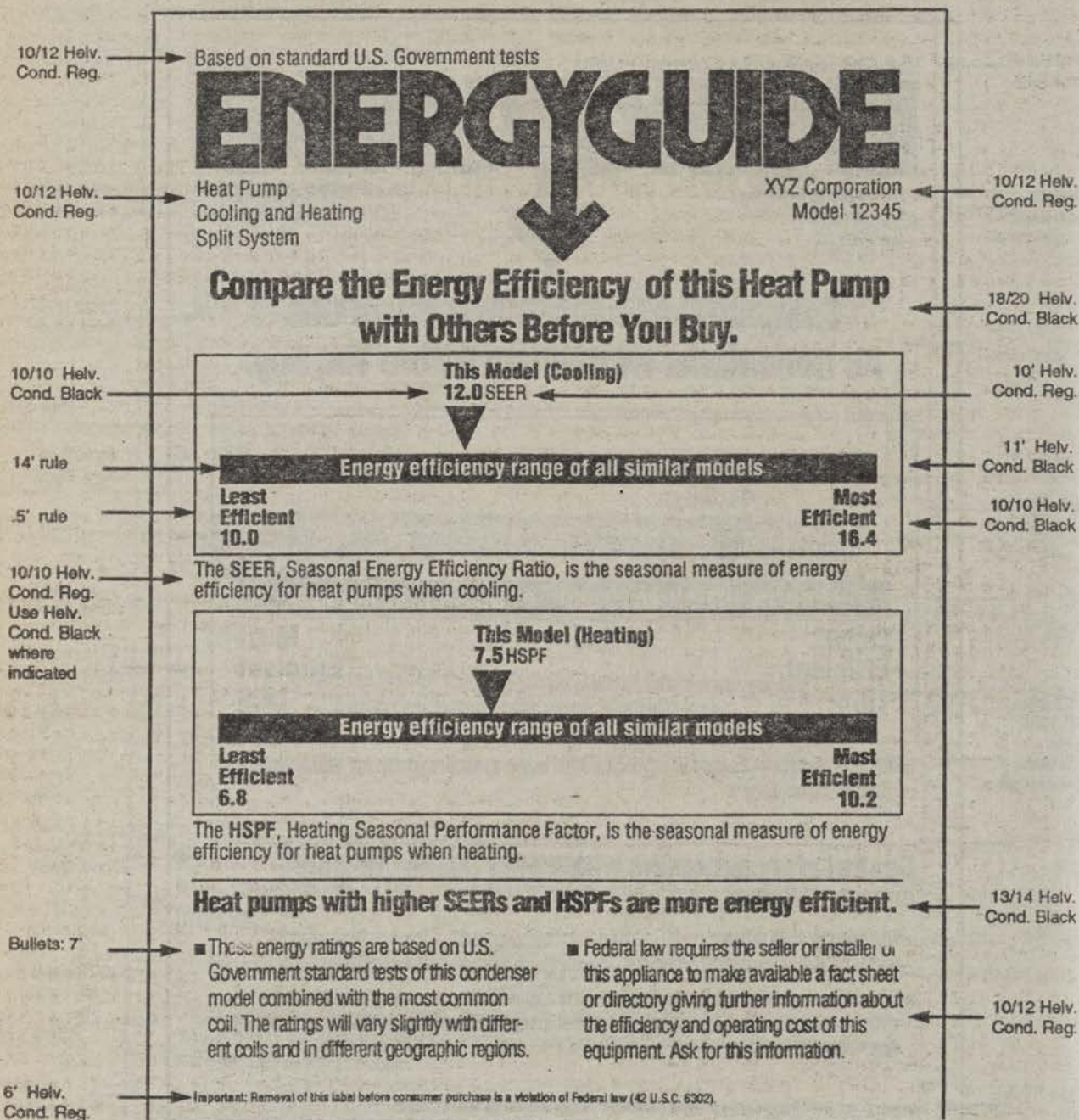
10/12 Helv.
Cond. Reg.6' Helv. Cond.
Reg.

Important: Removal of this label before consumer purchase is a violation of Federal law (42 U.S.C. 6302).

Prototype Label 4

All copy Helvetica Condensed Regular or Black

All copy x 28 pt.



Prototype Label 5

Based on standard U.S. Government tests

ENERGYGUIDE



Refrigerator-Freezer
With Automatic Defrost
With Side-Mounted Freezer
Without Through-the-Door-Ice Service

XYZ Corporation
Model ABC-W
Capacity: 23 Cubic Feet

**Compare the Energy Use of this Refrigerator
with Others Before You Buy.**

This Model Uses

776 kWh/year



Energy use (kWh/year) range of all similar models

**Uses Least
Energy
776**

**Uses Most
Energy
1467**

kWh/year (kilowatt-hours per year) is a measure of energy (electricity) use.
Your utility company uses it to compute your bill. Only models with 22.5 to 24.4
cubic feet and the above features are used in this scale.

**Refrigerators using more energy cost more to operate.
This model's estimated yearly operating cost is:**

\$64

Based on a 1992 U.S. Government national average cost of 8.25¢ per kWh for
electricity. Your actual operating cost will vary depending on your local utility rates
and your use of the product.

Important: Removal of this label before consumer purchase is a violation of Federal law (42 U.S.C. 6302).

Sample Label 1

Based on standard U.S. Government tests

ENERGYGUIDEFreezer
Upright Type
With Manual DefrostXYZ Corporation
Model(s) MR328, XL 12, NA83
Capacity: 21.2 Cubic Feet**Compare the Energy Use of this Freezer
with Others Before You Buy.****This Model Uses****764 kWh/year****Energy use (kWh/year) range of all similar models****Uses Least
Energy
630****Uses Most
Energy
1079**

kWh/year (kilowatt-hours per year) is a measure of energy (electricity) use.
Your utility company uses it to compute your bill. Only models with 19.5 to 21.4
cubic feet with the above features are used in this scale.

**Freezers using more energy cost more to operate.
This model's estimated yearly operating cost is:****\$63**

Based on a 1992 U.S. Government national average cost of 8.25¢ per kWh for
electricity. Your actual operating cost will vary depending on your local utility rates
and your use of the product.

Important: Removal of this label before consumer purchase is a violation of Federal law (42 U.S.C. 6302).

Sample Label 2

Based on standard U.S. Government tests

ENERGYGUIDEClothes Washer
Capacity: Standard
Top LoadingXYZ Corporation
Model(s) MR328, XL12, NAA83**Compare the Energy Use of this Clothes Washer
with Others Before You Buy.****This Model Uses
873 kWh/year****Energy use (kWh/year) range of all similar models****Uses Least
Energy
267****Uses Most
Energy
1818**

kWh/year (kilowatt-hours per year) is a measure of energy (electricity) use.
Your utility company uses it to compute your bill. Only standard size, top loading
clothes washers are used in this scale.

**Clothes washers using more energy cost more to operate.
This model's estimated yearly operating cost is:****\$72**

when used with an electric water heater

\$28

when used with a natural gas water heater

Based on eight loads of clothes a week and a 1992 U.S. Government national average cost
of 8.25¢ per kWh for electricity and 58¢ per therm for natural gas. Your actual operating
cost will vary depending on your local utility rates and your use of the product.

Important: Removal of this label before consumer purchase is a violation of Federal law (42 U.S.C. 6302).

Sample Label 3

Based on standard U.S. Government tests

ENERGYGUIDEDishwasher
Capacity: StandardXYZ Corporation
Model(s) MR328, XL12, NAA83**Compare the Energy Use of this Dishwasher
with Others Before You Buy.****This Model Uses
860 kWh/year****Energy use (kWh/year) range of all similar models****Uses Least
Energy
558****Uses Most
Energy
994**

kWh/year (kilowatt-hours per year) is a measure of energy (electricity) use.
Your utility company uses it to compute your bill. Only standard size dishwashers
are used in this scale.

**Dishwashers using more energy cost more to operate.
This model's estimated yearly operating cost is:****\$71**

when used with an electric water heater

\$39

when used with a natural gas water heater

Based on six washloads a week and a 1992 U.S. Government national average cost of
8.25¢ per kWh for electricity and 58¢ per therm for natural gas. Your actual operating cost
will vary depending on your local utility rates and your use of the product.

Important: Removal of this label before consumer purchase is a violation of Federal law (42 U.S.C. 6302).

Sample Label 4

Based on standard U.S. Government tests

ENERGYGUIDE



Water Heater—Natural Gas
Capacity (first hour rating):
60 gallons

XYZ Corporation
Model(s) RP23,
RP 38

**Compare the Energy Use of this Water Heater
with Others Before You Buy.**

This Model Uses
240 therms/year

Energy use (therms/year) range of all similar models

**Uses Least
Energy**
245

**Uses Most
Energy**
295

**The Estimated Annual Energy Consumption of this model was not
available at the time the range was published.**

Therms/year is a measure of energy use. Your utility company uses it to compute your bill. Only models with first hour ratings of 56 to 64 gallons are used in this scale.

**Natural gas water heaters that use fewer therms/year cost
less to operate. This model's estimated yearly operating
cost is:**

\$140

Based on a 1992 U.S. Government national average cost of \$0.58 per therm for natural gas. Your actual operating cost will vary depending on your local utility rates and your use of the product.

Important: Removal of this label before consumer purchase is a violation of Federal law (42 U.S.C. 6302).

Sample Label 5

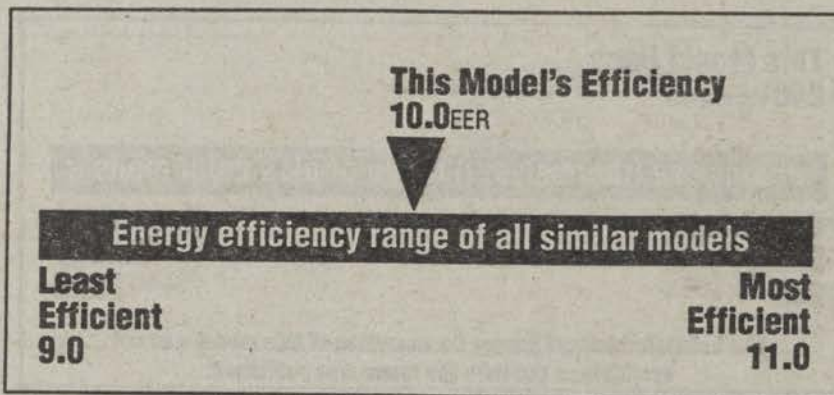
Based on standard U.S. Government tests

ENERGYGUIDE

Room Air Conditioner
Without Reverse Cycle
With Louvered Sides

XYZ Corporation
Model 122345
Capacity: 13,000 BTUs

**Compare the Energy Efficiency of this
Air Conditioner with Others Before You Buy.**



EER, the Energy Efficiency Ratio, is the measure of energy efficiency for room air conditioners. Only models between 8,000 and 13,000 BTUs with the above features are used in this scale.

**More efficient air conditioners cost less to operate.
This model's estimated yearly operating cost is:**

\$80

Based on a 1992 U.S. Government national average cost of 8.25¢ per kWh for electricity. Your actual operating cost will vary depending on your local utility rates and your use of the product.

Important: Removal of this label before consumer purchase is a violation of Federal law (42 U.S.C. 6302).

Sample Label 6

Based on standard U.S. Government tests

ENERGYGUIDE

Furnace—Natural Gas

XYZ Corporation
Model 2345X

**Compare the Energy Efficiency of this
Furnace with Others Before You Buy.**

This Model's Efficiency**80.7_{AFUE}****Energy efficiency range of all similar models****Least
Efficient
78.0****Most
Efficient
97.0**

The AFUE, Annual Fuel Utilization Efficiency, is the measure of energy efficiency for furnaces and boilers. Only furnaces fueled by natural gas are used in this scale.

**Natural gas furnaces that have higher AFUEs are more
energy efficient.**

Federal law requires the seller or installer of this appliance to make available a fact sheet or directory giving further information about the efficiency and operating cost of this equipment. Ask for this information.

Important: Removal of this label before consumer purchase is a violation of Federal law (42 U.S.C. 6302).

Sample Label 7

Based on standard U.S. Government tests

ENERGYGUIDE

Central Air Conditioner
Cooling Only
Split System

XYZ Corporation
Model 122345

**Compare the Energy Efficiency of this
Air Conditioner with Others Before You Buy.**

This Model's Efficiency
11.5^{SEER}



Energy efficiency range of all similar models

**Least
Efficient**
10.0

**Most
Efficient**
16.9

SEER, the Seasonal Energy Efficiency Ratio, is the measure of energy efficiency for central air conditioners.

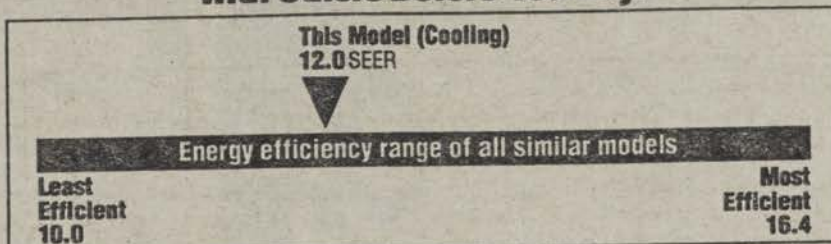
Central air conditioners with higher SEERs are more energy efficient.

- This energy rating is based on U.S. Government standard tests of this condenser model combined with the most common coil. The rating may vary slightly with different coils.
- Federal law requires the seller or installer of this appliance to make available a fact sheet or directory giving further information about the efficiency and operating cost of this equipment. Ask for this information.

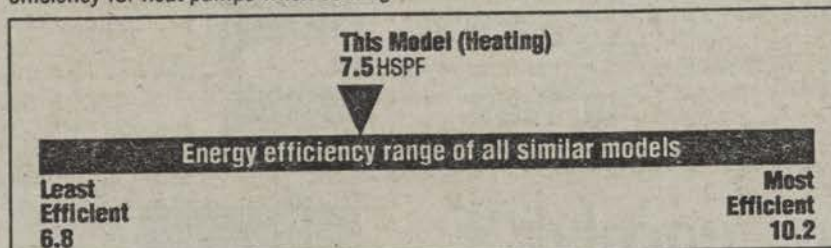
Important: Removal of this label before consumer purchase is a violation of Federal law (42 U.S.C. 6302).

Sample Label 8

Based on standard U.S. Government tests

ENERGYGUIDEHeat Pump
Cooling and Heating
Split SystemXYZ Corporation
Model 12345**Compare the Energy Efficiency of this Heat Pump
with Others Before You Buy.**

The SEER, Seasonal Energy Efficiency Ratio, is the seasonal measure of energy efficiency for heat pumps when cooling.



The HSPF, Heating Seasonal Performance Factor, is the seasonal measure of energy efficiency for heat pumps when heating.

Heat pumps with higher SEERs and HSPFs are more energy efficient.

- These energy ratings are based on U.S. Government standard tests of this condenser model combined with the most common coil. The ratings will vary slightly with different coils and in different geographic regions.
- Federal law requires the seller or installer of this appliance to make available a fact sheet or directory giving further information about the efficiency and operating cost of this equipment. Ask for this information.

Important: Removal of this label before consumer purchase is a violation of Federal law (42 U.S.C. 6302).

Sample Label 9

By direction of the Commission.

Donald S. Clark,

Secretary.

[FR Doc. 94-15792 Filed 6-30-94; 8:45 am]

BILLING CODE 6750-01-C

Test Report Federal Register

Friday
July 1, 1994

Part III

Environmental Protection Agency

40 CFR Parts 9 and 112

Oil Pollution Prevention; Non-
Transportation-Related Onshore Facilities;
Final Rule

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Parts 9 and 112

[SW H-FRL 5002-6]

RIN 2050-AD30

Oil Pollution Prevention; Non-Transportation-Related Onshore Facilities

AGENCY: U.S. Environmental Protection Agency (EPA).

ACTION: Final rule.

SUMMARY: This rule amends the Oil Pollution Prevention regulation, promulgated under the Clean Water Act for transportation-related onshore and offshore facilities. The revision incorporates new requirements added by the Oil Pollution Act of 1990 that direct certain facility owners and operators to prepare plans for responding to a worst case discharge of oil and to a substantial threat of such a discharge. Requirements to plan for a small and medium discharge of oil, as appropriate, are also added by this revision.

EFFECTIVE DATE: August 30, 1994.

ADDRESSES: The official record for this rulemaking is located in the Superfund Docket, Room M2615 at the U.S. Environmental Protection Agency, 401 M Street SW., Washington, DC 20460 [Docket Number SPCC-2P]. The docket is available for inspection between 9 a.m. and 4 p.m., Monday through Friday, excluding Federal holidays. Appointments to review the docket can be made by calling 202-260-3046. The public may copy a maximum of 266 pages from any regulatory docket at no cost. If the number of pages copied exceeds 266, however, a charge of 15 cents will be incurred for each additional page, plus a \$25.00 administrative fee.

FOR FURTHER INFORMATION CONTACT: Bobbie Lively-Diebold, Oil Pollution Response and Abatement Branch, Emergency Response Division (5202G), U.S. Environmental Protection Agency, 401 M Street, SW., Washington, DC 20460 at 703-356-8774; the ERNS/SPCC Information line at 202-260-2342; or the RCRA/Superfund Hotline at 800-424-9346 (in the Washington, DC metropolitan area, 703-412-9810). The Telecommunications Device for the Deaf (TDD) Hotline number is 800-553-7672 (in the Washington, DC metropolitan area, 703-412-3323).

SUPPLEMENTARY INFORMATION: The contents of this preamble are listed in the following outline:

- I. Introduction
 - A. Statutory Authority
 - B. The Oil Pollution Act of 1990
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I. Introduction

A. Statutory Authority

Section 4202(a)(6) of the Oil Pollution Act of 1990 (OPA), Public Law 101-380, amends section 311(j) of the Federal Water Pollution Control Act, also known as the Clean Water Act (CWA), and under CWA section 311(j)(5) (See 33 U.S.C. 1321(j)(5)) directs the President to issue regulations that require owners or operators of tank vessels, offshore facilities, and certain onshore facilities to prepare and submit to the President plans for, among other things, responding, to the maximum extent practicable, to a worst case discharge of oil and to a substantial threat of such a discharge.

Section 311(j)(1)(C) of the CWA authorizes the President to issue regulations establishing procedures, methods, equipment, and other requirements to prevent discharges of oil from vessels and facilities and to contain such discharges. (See 33 U.S.C. 1321(j)(1)(C).) The President has delegated the authority to regulate non-transportation-related onshore facilities under sections 311(j)(1)(C) and 311(j)(5) of the CWA to the U.S. Environmental Protection Agency (EPA or the Agency). (See Executive Order (E.O.) 12777, section 2(b)(1), 56 FR 54757 (October 22, 1991), superseding E.O. 11735, 38 FR 21243.) By this same E.O., the President has delegated similar authority over transportation-related onshore facilities, deepwater ports, and vessels to the U.S. Department of Transportation (DOT), and authority over other offshore facilities, including associated pipelines, to the U.S. Department of the Interior (DOI). A Memorandum of Understanding (MOU) among EPA, DOI, and DOT effective February 3, 1994, has redelegated the responsibility to regulate certain offshore facilities located in and along the Great Lakes, rivers, coastal wetlands,

and the Gulf Coast barrier islands from DOI to EPA. (See E.O. 12777 § 2(i) regarding authority to redelegate.) The MOU is included as Appendix B to 40 CFR part 112. An MOU between the Secretary of Transportation and the EPA Administrator, dated November 24, 1971 (36 FR 24080, December 18, 1971), establishes the definitions of non-transportation-related facilities and transportation-related facilities. The definitions from the MOU are currently included in Appendix A to 40 CFR part 112.

B. The Oil Pollution Act of 1990

The OPA (Public Law 101-380, 104 Stat. 484) was enacted to expand prevention and preparedness activities, improve response capabilities, ensure that shippers and oil companies pay the costs of spills that do occur, provide an additional economic incentive to prevent spills through increased penalties and enhanced enforcement, establish an expanded research and development program, and establish a new Oil Spill Liability Trust Fund, administered by the U.S. Coast Guard (USCG). As provided in sections 2002(b), 2003, and 2004 of the OPA, the new Fund replaces the fund originally established under section 311(k) of the CWA and other oil pollution funds.

Section 4202(a) of the OPA amends CWA section 311(j) to require regulations for owners or operators of facilities to prepare and submit "a plan for responding, to the maximum extent practicable, to a worst case discharge, and to a substantial threat of such a discharge, of oil or a hazardous substance." This requirement applies to all offshore facilities and any onshore facility that, "because of its location, could reasonably be expected to cause substantial harm to the environment by discharging into or on the navigable waters, adjoining shorelines, or the exclusive economic zone" ("substantial harm facilities"). As stated in the February 17, 1993 proposed rule (58 FR 8824), this rulemaking addresses only plans for responding to discharges of oil.

Under CWA and the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), the United States has developed a National Oil and Hazardous Substances Pollution Contingency Plan (NCP) (40 CFR part 300) and has established Area Committees to develop Area Contingency Plans (ACPs) as elements of a comprehensive oil and hazardous substance spill response system. As amended by the OPA, CWA section 311(j)(5)(C) sets forth certain

minimum requirements for facility response plans. The plans must:

- Be consistent with the requirements of the NCP and ACPs;
- Identify the qualified individual having full authority to implement removal actions, and require immediate communications between that individual and the appropriate Federal official and the persons providing removal personnel and equipment;
- Identify and ensure by contract or other approved means the availability of private personnel and equipment necessary to remove, to the maximum extent practicable, a worst case discharge (including a discharge resulting from fire or explosion), and to mitigate or prevent a substantial threat of such a discharge;
- Describe the training, equipment testing, periodic unannounced drills, and response actions of persons at the facility, to be carried out under the plan to ensure the safety of the facility and to mitigate or prevent a discharge or the substantial threat of a discharge; and
- Be updated periodically.

Under section 311(j)(5)(D), additional review and approval provisions apply to response plans prepared for offshore facilities and for onshore facilities that, because of their location, "could reasonably be expected to cause significant and substantial harm to the environment by discharging into or on the navigable waters or adjoining shorelines or the exclusive economic zone" (emphasis added) ("significant and substantial harm facilities"). Under authority delegated in E.O. 12777, EPA is responsible for the following activities for each of these response plans at non-transportation-related onshore facilities:

- Promptly reviewing the response plan;
- Requiring amendments to any plan that does not meet the section 311(j)(5) requirements;
- Approving any plan that meets these requirements; and
- Reviewing each plan periodically thereafter.

The CWA and the OPA require that owners or operators of "substantial harm facilities" submit their response plans to EPA (as delegated by the President in E.O. 12777) by February 18, 1993, or stop handling, storing, or transporting oil. In addition, under CWA section 311(j)(5) and OPA section 4202(b)(4), a facility required to prepare and submit a response plan under the OPA may not handle, store, or transport oil after August 18, 1993 unless: (1) in the case of a facility for which a plan is reviewed by EPA, the plan has been approved by EPA; and (2) the facility is

operating in compliance with the plan. The statute provides that a "significant and substantial harm facility" may be allowed to operate without an approved response plan for up to two years after the facility submits a plan for review (no later than February 18, 1995), if the owner or operator certifies that he or she has ensured by contract or other approved means the availability of private personnel and equipment necessary to respond, to the maximum extent practicable, to a worst case discharge of oil, or a substantial threat of such a discharge. Owners or operators of "substantial harm facilities" are not required to have their plans approved by EPA, but, are required to operate in compliance with their plans after August 18, 1993.

Under the OPA, facility owners or operators who fail to comply with section 311(j) requirements are subject to new administrative penalties and more stringent judicial penalties than those imposed previously under the CWA. Section 4301(b) of the OPA amends CWA section 311(b) to authorize a civil judicial penalty of \$25,000 per day of violation for failure to comply with regulations under CWA section 311(j). In addition to these civil penalties, OPA section 4301(b) amends CWA section 311(b) to authorize administrative penalties for failure to comply with section 311(j) regulations of up to \$10,000 per violation, not to exceed \$25,000 for Class I penalties, and up to \$10,000 per day per violation, not to exceed \$125,000 for Class II penalties. The differences between "Class I" and "Class II" administrative penalties are the amounts of the potential penalties and the hearing procedures used (for instance, Class II procedures will generally ensure the owner or operator a more extensive opportunity to be heard through the proceedings). These revised penalty provisions are applicable to violations occurring after the August 18, 1990, enactment of the OPA. Violations occurring before enactment of the OPA remain subject to penalty provisions originally set forth in CWA section 311.

C. Background of the Rulemaking Jurisdictional Issues

Although the issue was not raised specifically in the proposed rule, the question of clarifying jurisdiction is a pervasive issue in this rulemaking, because there are a number of regulatory agencies with OPA authority over the same or similar entities.

By E.O. 12777, the President delegated certain OPA authorities to EPA, DOI, and DOT. By terms of the

E.O., EPA must develop response plan regulations for onshore non-transportation-related facilities, while the Minerals Management Service (MMS) in DOI is granted similar authority for offshore non-transportation-related facilities. The USCG must develop requirements for vessels and offshore transportation-related facilities, and the Research and Special Programs Administration (RSPA) has responsibility for onshore pipelines and rolling stock. (The USCG and RSPA are agencies in DOT.)

As it applies to the CWA, the term "offshore facility" means any facility of any kind located in, on, or under any of the navigable waters of the United States, and any facility of any kind that is subject to the jurisdiction of the United States and is located in, on, or under any other waters, other than a vessel or a public vessel. (See CWA section 311(a)(ii).) The combined effect of this definition and the delegations under E.O. 12777 gives DOI (MMS) responsibility for non-transportation-related fixed offshore facilities in inland lakes and rivers. (See E.O. § 2(b)(3).)

However, EPA, DOI-MMS, and DOT have agreed that EPA responsibility should extend to these non-transportation-related fixed offshore facilities in inland lakes and rivers, because EPA has the expertise to provide oversight of facility functions, and because the maintenance of continuity in oversight will facilitate compliance for the regulated community. Under § 2(i) of E.O. 12777, the President authorized EPA, DOI, and DOT to redelegate any of their responsibilities under the OPA to the head of any Executive department or agency with the consent of the agency head. The Secretaries of DOI and DOT, and the Administrator of EPA signed an MOU on February 3, 1994, that gives to EPA jurisdiction all non-transportation-related fixed facilities located landward of the "coast line." For purposes of the MOU, the term "coast line" is defined as in the Submerged Land Act (43 U.S.C. 1301(c)) to mean "the line of ordinary low water along that portion of the coast that is in direct contact with the open sea and the line marking the seaward limit of inland waters." MMS has prepared detailed charts that reflect the position of the "coast line" and can be contacted for additional information on the status of a particular facility.

EPA does not address response plan requirements for non-transportation-related fixed offshore facilities in this final rule, but will do so under a separate rulemaking. However, because EPA now has jurisdictional responsibility over such facilities,

response plans for these facilities must be submitted to EPA rather than to MMS. Until EPA promulgates a rule for non-transportation-related fixed offshore facilities formerly under MMS authority, the Agency will review response plans for these facilities under the OPA statutory criteria. Until such a rule is promulgated, these facilities should look to this final rule as guidance.

Coordination with Other Federal Programs

Federal and State Government Coordination Efforts. EPA and other Federal agencies with jurisdiction under the OPA and E.O. 12777 (including the USCG, the Office of Pipeline Safety in RSPA, and MMS) met during the development of this rule to create an implementation strategy that minimizes duplication wherever practicable and recognizes State oil pollution prevention and response programs. The Agency also participated in a workgroup with representatives from the National Oceanic and Atmospheric Administration (NOAA), the Fish and Wildlife Service, the National Park Service, and other Federal agencies. These meetings and workgroup sessions were held to develop a consistent approach among Federal agencies and between Federal and State governments for oil response planning, and to develop guidelines and evaluation criteria for drills/exercises and training conducted to meet the OPA requirements and for identification of "environmentally sensitive areas" (now "fish and wildlife and sensitive environments").¹ These meetings were held at various times from January 1993 to January 1994.

One of the critical outgrowths of these efforts was the development of a consistent approach to regulate "complexes." (A complex is a facility with a combination of transportation-related and non-transportation-related components, e.g., a marine transfer facility with aboveground storage tanks.) A complex is subject to the jurisdiction of more than one Federal agency under the President's delegation implementing section 311(j) of the CWA. Among the ways EPA has reduced the complexity of planning requirements for these facilities is to better align EPA's

Appendix E (Appendix F in the proposed rule renamed in this final rule as "Determination and Evaluation of Required Response Resources for Facility Response Plans") with USCG response resource rules developed for marine transfer facilities (February 5, 1993, 58 FR 7330). (A complete discussion of Appendix E appears later in this preamble.) For non-transportation-related facilities that handle or store non-petroleum oils, EPA also has adopted an approach similar to the USCG's regulatory approach for response equipment strategies (58 FR 7362).

The coordination efforts resulted in several key decisions which are described below and discussed in greater depth later in this preamble. A common theme of discussion among agency representatives was the need to facilitate the regulated community's efforts to implement multiple sets of response planning requirements. EPA emphasizes that it will accept a response plan prepared to meet State or other Federal requirements as long as the plan meets the requirements of this final rule and is appropriately cross-referenced. In response to the need to provide owners or operators with additional direction on conducting drills/exercises to meet the OPA requirements, the National Preparedness for Response Exercise Program (PREP) was developed through a joint effort of the Federal agencies implementing OPA response plan regulations with involvement from other Federal representatives (e.g., natural resource trustees), State agencies, members of the regulated community, and oil spill response organizations. These efforts resulted in the creation of guidelines to assist owners or operators in following the PREP. EPA references, as guidance, PREP guidelines at § 112.21 of today's final rule. The PREP draft guidelines are available from Petty Officer Daniel Caras at (202) 267-6570 or fax 267-4085/4065. (See Appendix E to this part, section 10, for availability). The USCG has developed similar guidance for training, and EPA references these training guidelines at § 112.21 of today's final rule, indicating that following these guidelines (or demonstrating a comparable program) is an acceptable means to satisfy the OPA requirement to describe training.

Another interagency effort that resulted in a coordinated approach to develop response plan requirements involved the identification of fish and wildlife and sensitive environments. The Federal agencies implementing OPA regulations contributed to the development of a guidance document

prepared by the natural resource trustees to assist owners or operators in identifying fish and wildlife and sensitive environments for the evaluation of the substantial harm criteria and for the development of a response plan, if required. Although EPA has removed the proposed Appendix D that covered this subject, facility owners and operators still must consider fish and wildlife and sensitive environments. EPA refers facility owners or operators to Appendices I, II, and III of the "Guidance for Facility and Vessel Response Plans: Fish and Wildlife and Sensitive Environments" published by NOAA within the Department of Commerce (DOC) in the *Federal Register* at 59 FR 14714, March 29, 1994. This document will provide guidance on fish and wildlife and sensitive environments until geographic-specific annexes of ACPs are fully developed. (See the discussion of ACPs later in this preamble.) Owners or operators are encouraged to contact the appropriate Area Committee, EPA Regional office (inland areas), USCG Captain of the Port (coastal areas), or natural resource agencies listed in the DOC/NOAA Guidance for information on fish and wildlife and sensitive environments as it becomes available.

A final critical area where Federal agencies implementing the OPA reached agreement was the review of response plans. For response purposes, the NCP divides the United States into inland and coastal zones, with EPA responsible for providing On-Scene Coordinators (OSCs) for the inland zone, and the USCG responsible for providing OSCs for the coastal zone. EPA will provide an opportunity for designated USCG OSCs to review and comment on response plans for non-transportation-related onshore facilities subject to 40 CFR part 112, and geographically located in the coastal zone. For facilities subject to 40 CFR part 112, EPA will maintain the responsibility for final approval of the response plan; however, the Regional Administrator (RA) will consider any USCG OSC objection to a response plan and attempt to resolve any issues through interagency discussions.

The NCP and ACPs. Section 311(j)(5)(C) of the CWA requires that facility response plans be consistent with the requirements of the NCP and ACPs. The NCP provides the general organizational structure and procedures for addressing discharges of oil and hazardous substances under the CWA, as well as releases of hazardous substances, pollutants, and contaminants under CERCLA. Among other things, the NCP specifies

¹ The term "environmentally sensitive areas" has been changed to the term "fish and wildlife and sensitive environments" throughout this preamble and the final rule to be consistent with the terminology used in proposed revisions to the NCP (See 58 FR 54702) that implement OPA requirements. The terms have the same meaning and the change is not meant to imply an expansion in the types of areas identified for protection under the OPA.

responsibilities among Federal, State, and local governments; describes resources available for response; summarizes State and local emergency planning requirements under the Emergency Planning and Community Right-to-Know Act (EPCRA or SARA Title III); and establishes procedures for undertaking removal actions under the CWA. Until a revised NCP is published, as mandated under OPA section 4201(c), facility response plans should be consistent with the current NCP and, if necessary, revised to be consistent with the pending NCP revisions when they are promulgated. (Revisions to the NCP were proposed on October 22, 1993, at 58 FR 54702.)

ACPs are mandated under CWA section 311(j)(4) and prepared by Area Committees comprised of members appointed by the President from qualified personnel of Federal, State, and local agencies. When implemented in conjunction with other elements of the NCP, ACPs must be adequate to remove a worst case discharge from a facility operating in or near the area covered by the plan. ACPs cover discharges affecting all U.S. waters and adjoining shorelines. EPA and the USCG are responsible for establishing Area Committees for the inland and coastal zones, respectively. In the inland Regions, ACPs have been completed and approved by EPA. The ACP process, however, is dynamic, and Area Committees will continue to refine the ACPs to provide more detailed information on protection priorities, develop protection strategies, and identify appropriate cleanup strategies for inland areas. Area Committees have the option to further subdivide their areas into smaller, geographically distinct subareas and develop geographic-specific annexes for these subareas. Members of the public may contribute to the ACP refinement process through involvement with Area Committees in the development of geographic-specific annexes.

Resource Conservation and Recovery Act (RCRA). EPA regulations in Subpart D of 40 CFR part 264, and Subpart D of 40 CFR part 265 promulgated under RCRA, require owners and operators of hazardous waste facilities to develop facility-specific contingency plans. The plans must include response procedures; a list of each person qualified to act as a facility emergency coordinator; a list of all emergency equipment and, when required, decontamination equipment at the facility; evacuation plans, when evacuation could be necessary; and arrangements agreed to by local police departments, fire departments,

hospitals, contractors, and State and local emergency response teams to coordinate emergency services. In addition, newly promulgated 40 CFR part 279 establishes facility-specific contingency planning and emergency procedure requirements for used oil at reprocessing and refining facilities. To avoid duplication of effort, owners or operators of facilities subject to the regulations in 40 CFR parts 264, 265, and 279 may incorporate these RCRA provisions and the response planning requirements of other applicable Federal regulations into their facility response plans.

EPCRA. Among other things, EPCRA requires local emergency planning committees (LEPCs) to develop local emergency response plans for their community and review them at least annually. Under EPCRA, the owner or operator of a facility where a listed "extremely hazardous substance" is present in an amount in excess of the threshold planning quantity must notify the State emergency response commission (SERC). In addition, upon request of the LEPC, the owner or operator must provide the LEPC with any information necessary to develop and implement the local emergency response plan. Because of the requirement that certain facilities participate in emergency planning under EPCRA, some overlap may exist with response plan requirements outlined in today's rule.

The OPA Conference Report states that OPA facility response plans should be consistent with plans prepared under other programs, and that any information developed under section 311(j) should be made available to SERCs and LEPCs. (See OPA Conference Report, H.R. Rep. No. 101-653, 101st Cong., 2d Sess. 1990 at p. 151.) Therefore, a facility response plan should be consistent with the local emergency response plan for the community in which the facility is located, and to ensure such consistency, facility owners or operators should review the appropriate local emergency response plan. In addition, upon request of the LEPC or SERC, the facility should provide a copy of the facility response plan.

Clean Air Act. Under section 112(r) of the Clean Air Act (CAA), as amended in 1990, EPA is to promulgate risk management program regulations for the prevention and detection of accidental releases and for responses to such releases, including requirements for a risk management plan (RMP) for chemical accidental release prevention. The regulation listing the covered chemicals and threshold quantities was

published in the Federal Register on January 31, 1994 (59 FR 4478). The proposed rule for the risk management program was published in the Federal Register on October 20, 1993 (58 FR 54190).

Regulated facilities are required to do three things: register with EPA; develop and implement a risk management program that includes a hazard assessment, a prevention program, and an emergency response program; and develop and submit an RMP to the Chemical Safety and Hazard Investigation Board, the implementing agency, the SERC, and the LEPC. The RMP is to be made available to the public.

EPA anticipates that facilities affected by both regulations can prepare one response plan that meets the Oil Pollution Act requirements for oil and the CAA requirements for chemicals.

Prevention Technical Requirements

EPA's proposed rule for the facility response plan rulemaking contained certain provisions related to aspects of 40 CFR part 112 that did not address the OPA facility response plan requirements. EPA has decided not to include these provisions in today's final rule. These provisions are more closely related to the 40 CFR part 112 revisions proposed on October 22, 1991 (56 FR 54612), and will be finalized when that proposal is finalized. The proposed provisions not included in today's final rule are as follows:

- § 112.1(d)(4)—Reiterating that Underground Storage Tanks are to be Marked on Diagrams;
- § 112.1(g)—Regional Administrator Authority to Require SPCC Plan Preparation;
- § 112.2—Definitions of "Alteration" and "Repair";
- § 112.4(d)—Amendment of SPCC Plan by Regional Administrator;
- § 112.7(a)(2)—Submission of SPCC Plans for Waiver of Technical Requirements;
- § 112.7(d)—Requirement to Prepare a Contingency Plan When the Installation of Secondary Containment Structures is not Practicable;
- § 112.7(f)—Prevention Training; and
- § 112.7(i)/Appendix H—Ensuring Against Brittle Fracture.

Only proposed changes to §§ 112.2 (except for the definitions of "alteration" and "repair") and 112.20, and the addition of § 112.21 are included in today's final rule. The content of § 112.21 is adapted from § 112.7 of the proposed rule which addressed training and drills/exercises for both prevention and response.

II. Summary of Revisions to the Oil Pollution Prevention Regulation

This section provides a summary of the response planning provisions included in today's final rule. Section II.A provides a brief summary of the overall approach to implementation of response plan requirements. In Section II.B, EPA summarizes and responds to major issues raised by the public during the comment period. Finally, Section II.C provides a section-by-section discussion of changes from the proposed rule to the final rule.

A. Summary of Approach to Implementing Facility Response Plan Requirements

EPA is finalizing an approach for identifying facilities subject to response planning requirements similar to that outlined in the proposed rule. Only owners or operators of "substantial harm facilities" are required to prepare and submit plans. EPA will approve only those plans submitted for "significant and substantial harm facilities." Risk-based factors for evaluating the potential to cause substantial harm and significant and substantial harm are established in § 112.20(f) of today's rule and include: type of transfer operation; oil storage capacity; lack of secondary containment; proximity to fish and wildlife and sensitive environments (described as "environmentally sensitive areas" in the proposal), navigable waters, and drinking water intakes; spill history; age of oil storage tanks; and other facility-specific and Region-specific information.

There are two methods by which an onshore facility may be determined to be a "substantial harm facility." The first involves the use of substantial harm criteria provided in § 112.20(f)(1) and in the flowchart in Appendix C to 40 CFR part 112 by owners or operators to identify "substantial harm facilities." The second provides each RA the authority to determine whether any facility subject to the Oil Pollution Prevention regulation is a "substantial harm facility" based on the specific criteria in § 112.20(f)(1), the factors in § 112.20(f)(2)(A)-(F), or other site-specific characteristics and environmental factors that may be relevant under § 112.20(f)(2)(G). In applying these factors, the RA may seek input on specific facilities from other agencies such as the USCG and natural resource trustee agencies. The RA also may consider petitions from the public to determine whether a facility is a "substantial harm facility."

To determine whether an onshore facility could be a "significant and substantial harm facility," the RA will consider the substantial harm criteria in § 112.20(f)(2) as well as additional factors in § 112.20(f)(3), including site-specific information such as local impacts on public health.

In today's final rule, facility owners or operators are provided with a process to appeal the substantial harm and significant and substantial harm determinations or the RA's decision not to approve a response plan for which approval is required.

Finally, under § 112.20(e), owners or operators who are not required to submit plans must maintain onsite at the facility a signed certification form, which indicates that the facility has been determined by the facility owner or operator not to meet the criteria in § 112.20(f)(1).

Discussion of Response Plans

Those facility owners or operators who submit plans must include a signed response plan cover sheet (as provided in 40 CFR part 112, Appendix F, Attachment F-1), which indicates that the information contained in the plan is accurate, and that gives a basic summary of facility information, including the results of the substantial harm determination.

The required elements for response planning in § 112.20(h) of this rule are designed to direct a facility owner or operator in gathering the information needed to prepare a response plan. The response plan elements address requirements under CWA section 311(j)(5) (as amended by the OPA), including requirements for response training and participation in response drills/exercises. Appendix F to the rule includes a model response plan that further describes the required elements in § 112.20(h). The majority of elements in the model plan are taken directly from § 112.20(h) or are logical extensions of the general requirements in § 112.20(h) and are therefore requirements prefaced by use of the word "must" or "shall." EPA recognizes that certain other elements may not be applicable in all cases. To provide flexibility for facilities with unique circumstances, certain elements are prefaced by use of the words "shall, as appropriate" or are modified by use of the words "or an equivalent." Finally, other elements are presented as recommendations and are prefaced by use of the word "may."

As discussed previously in this preamble, the requirements in § 112.20(h) and the model response plan in Appendix F do not preclude the use

of a preexisting response plan. Owners or operators may submit a plan prepared to meet other Federal or State requirements, as long as the elements in § 112.20 are addressed (including the requirement for an emergency response action plan), and a cross-reference to the model response plan is provided.

Under today's rule, owners or operators of "substantial harm facilities" must prepare plans to respond to a worst case discharge, and small and medium discharges as appropriate. Such response planning by facilities will help ensure protection of public health and welfare and the environment by facilitating effective response to discharges to navigable waters or adjoining shorelines. The requirement to plan for several different spill sizes is consistent with other agencies' (such as the USCG's) implementation of OPA response planning requirements. For example, the average most probable discharge and the maximum most probable discharge under the USCG interim final rule set out the same values in barrels as EPA sets out in gallons for small and medium spills (58 FR 7358, February 5, 1993). EPA is authorized to require owners or operators to plan for small and medium discharges by § 311(j)(1)(C) of the CWA.

OPA section 4201(b) (CWA section 311(a)(24)) defines "worst case discharge" for a facility as the largest foreseeable discharge in adverse weather conditions. The OPA Conference Report indicates that facility owners or operators are expected to prepare plans for responding to discharges that are worse than either the largest spill to date at the facility or the maximum probable spill for that facility type. (See H.R. Rep. No. 101-653, 101st Cong., 2d Sess. 1990 at pp. 149-150.) Today, EPA finalizes a requirement for a facility's worst case discharge planning amount based on the capacity of the largest single tank within a secondary containment area, or the combined capacity of a group of aboveground tanks permanently manifolded together within a common secondary containment area lacking internal subdivisions, whichever is greater; plus an additional quantity based on lack of secondary containment, as appropriate. (For facilities that lack secondary containment for all tanks, the worst case discharge would be the total storage capacity at the facility.) Production facilities would also need to consider production volumes. Single tank facilities are allowed to reduce the worst case discharge volume for the presence of adequate secondary containment.

EPA has provided worksheets in Appendix D, which owners or operators of storage and production facilities are required to use in the calculation of worst case discharge amounts. For complexes, the worst case discharge volume is the larger of the amounts calculated for each component of the facility regulated by a different agency using procedures contained in the respective regulations. EPA requires that owners or operators of complexes (a complex is a facility with a combination of transportation-related and non-transportation-related components, e.g., a marine transfer facility with aboveground storage tanks) plan for the single largest worst case discharge at the facility. To facilitate this process, EPA has modified Appendix E as described in Section II.B of this preamble to be consistent with the USCG's "Guidelines for Determining and Evaluating Required Response Resources for Facility Response Plans."

In addition to planning for a worst case discharge, under proposed § 112.20, facility owners and operators are required to plan for (1) a small spill, defined as any spill volume less than or equal to 2,100 gallons, provided that this amount is less than the worst case discharge amount; and (2) a medium spill, defined as any spill volume greater than 2,100 gallons, and less than or equal to 36,000 gallons or 10 percent of the capacity of the largest tank at the facility, whichever is less, provided that this amount is less than the worst case discharge amount. For facilities where the worst case discharge is a medium spill, the owner or operator is required to plan for two amounts, a worst case spill and a small spill. For facilities where the worst case discharge is a small spill, the owner or operator must plan only for a worst case discharge.

For medium spills at complexes, the owner or operator must first determine a medium spill volume for the transportation-related and non-transportation-related components at the facility. (The USCG's term "maximum most probable discharge" is generally equivalent to a medium spill. See 58 FR 7354.) The owner or operator must then compare the medium planning amounts for each component of the facility. Following this comparison, the owner or operator must select the larger of the quantities as the medium planning amount for the overall facility. A similar procedure must be followed for a small spill. (The USCG's term "average most probable discharge" is generally equivalent to a small spill. See 58 FR 7353.) EPA requires that owners or operators of complexes plan for a single small and

medium spill at the facility in accordance with the requirements in Appendix E.

Equipment Requirements

In Appendix E to today's rule, EPA establishes requirements to determine for planning purposes the quantity of resources and response times necessary to respond to the "maximum extent practicable" to a worst case discharge, and to other discharges, as appropriate. The requirements were adapted from similar requirements developed by the USCG for vessel response plans and facility response plans for marine transportation-related onshore facilities. These procedures recognize practical and technical limits on response capabilities that an individual facility owner or operator can provide in advance and on response times for resources to arrive on scene. To address these limitations, Appendix E establishes operability criteria for oil response resources and caps on response resources that facility owners or operators must identify and ensure the availability of, through contract or other approved means. The caps reflect an estimate of the response capability at a given facility that is considered a practical target to be met by 1993 and beyond.

Appendix E (Appendix F in the proposed rule) has been renamed "Determination and Evaluation of Required Response Resources for Facility Response Plans." EPA made this change to clarify that facility owners and operators must use this appendix to determine whether they have appropriate and adequate amounts of resources to meet the planning requirements in this final rule. In this appendix, EPA has substituted the words "shall" or "shall, as appropriate" for the word "should" to clarify whether the requirements are mandatory, regardless of the circumstances. The phrase "shall, as appropriate" is consistent with EPA's intent in the proposal to provide owners or operators flexibility for facilities with unique circumstances. As required at § 112.20(h)(3)(i), in cases where it is not appropriate to follow part of Appendix E to identify response resources to meet the facility response plan requirements, owners or operators must clearly demonstrate in the plan why use of Appendix E is not appropriate at the facility and make comparable arrangements for response resources.

Section 311(j)(5)(C)(iii) of the CWA requires the facility response plan to identify and ensure the availability, by contracts or other means approved by the President (as delegated to EPA), of

private personnel and equipment necessary to respond to the maximum extent practicable, to a worst case discharge. For the purposes of today's rule, "contract or other approved means" is defined in § 112.2 of today's final rule as:

- A written contractual agreement with an Oil Spill Removal Organization (OSRO(s)). The agreement must identify and ensure the availability of the necessary personnel and equipment within appropriate response times; and/or

- Written certification that the necessary personnel and equipment resources, owned or operated by the facility owner or operator, are available to respond to a discharge within appropriate response times; and/or

- Active membership in a local or regional OSRO(s), which has identified and ensures adequate access, through membership, to necessary personnel and equipment within appropriate response times in the specified geographic areas; and/or

- Other specific arrangements approved by the RA upon request of the owner or operator.

If the owner or operator plans to rely on facility-owned equipment to satisfy the requirement at § 112.20(h)(3) to identify and ensure the availability of response resources, then equipment inventories must be provided. When relying on other arrangements, evidence of contracts or approved means must be included in the response plan so that the availability of resources can be verified during plan review. It is not necessary to list specific quantities of equipment in the facility response plan when listing a USCG-classified OSRO(s) that has sufficient removal capacity to recover up to the rate indicated by the associated caps. (See Section II.B of this preamble for additional discussion on this issue.)

Final Rule Application to Affected Facilities

The following paragraphs present EPA's approach to implement the response plan requirements of OPA and of this final rule. Section 112.20(a) of the rule has been revised to reflect this approach.

The Agency proposed in the February 17, 1993 Federal Register (58 FR 8824) its facility response plan rule for non-transportation-related onshore facilities under its jurisdiction. Before this publication, EPA made available outreach materials describing its basic approach for implementation of the OPA response plan requirements to allow facility owners or operators the opportunity to prepare and submit

response plans by the February 18, 1993, OPA deadline. EPA received over 4,500 plans from owners or operators of facilities that met the criteria to be a "substantial harm facility." EPA Regional personnel have identified the subset of "significant and substantial harm facilities" from those facilities that submitted response plans by February 18, 1993 and, as appropriate, issued authorizations to these facilities to continue to operate after August 18, 1993, based on a review of a facility's certification of response resources. These plans will be reviewed and, if appropriate, approved under the OPA statutory requirements by February 18, 1995. For *inadequate plans* submitted before the February 18, 1993 statutory deadline, RAs may notify facility owners or operators that additional information or plan revisions are necessary in advance of February 18, 1995, for plan approval.

To recognize the compliance efforts of owners or operators of those facilities in existence on or before February 18, 1993 who submitted response plans to meet the OPA requirements by the statutory deadline, EPA will allow them until February 18, 1995 to revise their response plan, if necessary, to satisfy the requirements of this rule and resubmit their plans (or updated portions) to the RA. (See § 112.20(a)(1)(i).) The revised plans for "significant and substantial harm facilities" will be reviewed periodically thereafter on a schedule established by the RA provided that the period between plan reviews does not exceed five years. (See § 112.20(c)(4).) RAs may institute a process by which such plan reviews are staggered so that not all plans will need to be reapproved in the same year.

Owners or operators of existing facilities that were in operation on or before February 18, 1993 who failed to submit a facility response plan to meet the OPA requirements by February 18, 1993 must submit a response plan that meets the requirements of this rule to the RA by the effective date of the final rule. (See § 112.20(a)(1)(ii).) EPA recognizes that such facilities may have prepared and submitted to the RA some form of a response plan after the statutory deadline. Owners or operators may submit revised portions of the plan to bring the plan into compliance with the final rule requirements. Plans for "significant and substantial harm facilities" will be reviewed for initial approval by RAs within a reasonable time. Such plans will be reviewed periodically thereafter on a schedule established by the RA provided that the period between plan reviews does not

exceed five years. RAs may choose to stagger such plan reviews.

Owners or operators of facilities that commenced operations after February 18, 1993 but before the effective date of this final rule must submit a response plan that meets the requirements of this final rule to the RA by its effective date. EPA recognizes that such facilities may have prepared and submitted some form of a response plan to the RA prior to the publication of this rule. Owners or operator may submit revised portions of the plan to bring the plan into compliance with the final rule requirements. (See § 112.20(a)(2)(i).) RAs will review plans for "significant and substantial harm facilities" for initial approval within a reasonable time. The plans will then be placed on the Region's review cycle as described in the preceding paragraphs.

The Agency recognizes that identification of "substantial harm facilities" will continue to occur as new facilities come on-line and existing facilities newly meet the criteria for substantial harm as a result of a change in operations or site characteristics. EPA is requiring in § 112.20(a)(2)(ii) and (iii) that: (1) newly constructed facilities (facilities that come into existence after the effective date of the final rule) that meet the applicability criteria must prepare and submit a response plan in accordance with the final rule prior to the start of operations (adjustments to the response plan to reflect changes that occur at the facility during the start-up phase of operations must be submitted to the Regional Administrator after an operational trial period of 60 days); and (2) existing facilities that become subject to the response plan requirements as the result of a planned change in operations (after the effective date of the final rule) must prepare and submit a response plan in accordance with the final rule prior to the implementation of changes at the facility. RAs will review plans submitted for such newly designated "substantial harm facilities" to determine if a facility is a "significant and substantial harm facility." RAs will review for approval plans for "significant and substantial harm facilities" within a reasonable time and then place the plans on the Region's review cycle as discussed previously.

An existing facility, however, may become subject to the response plan requirements through one or a combination of unplanned events, such as a reportable spill or the identification of fish and wildlife and sensitive environments adjacent to the site during the ACP refinement process. In the event of such an unplanned change, the owner or operator is required to prepare

and submit a response plan to the RA within six months of when the change occurs (See § 112.20(a)(2)(iv).) The Agency believes that allowing six months from when a change caused by an unplanned event occurs to prepare and submit a plan is reasonable.

Under § 112.20(g)(2), facility owners or operators are required to review appropriate sections of the NCP and ACP annually and revise their response plans accordingly. In addition, § 112.20(d)(1) requires the owner or operator of a facility for which a response plan is required to resubmit relevant portions of the plan within 60 days of each material change in the plan. For "substantial harm facilities," Regions will review such changes to determine if the facility should be reclassified as a "significant and substantial harm facility." For "significant and substantial harm facilities," the Regions will review such changes for approval as described in § 112.20(d)(4).

B. Response to Major Issues Raised by Commenters

A total of 1282 comments were received on the proposed rule. The majority of these comments were one-page form letters from members of, and on behalf of, numerous environmental professional groups and addressed the issue of whether certification of response plans by an independent party was appropriate. A document entitled "Response to Comments Document for the Facility Response Plan Rulemaking" that summarizes and provides responses to all comments received on the proposed rule is available in the public docket. The major issues raised by the commenters and the Agency's responses are described in this section.

Option One vs. Option Two

In the preamble to the proposed rule, the Agency discussed two options for identifying facilities subject to facility response plan requirements under this rulemaking. In the proposed rule, EPA proposed the first option, but requested comment on the merits of both options. The two alternatives are outlined briefly in the next paragraph.

Under Option 1, EPA proposed to require under CWA sections 311(j)(5) and 311(j)(1)(C) that: (1) the owner or operator of a "substantial harm facility" prepare and submit a response plan, and (2) "significant and substantial harm facilities" have their plans promptly reviewed for approval by EPA. Criteria provided in § 112.20(f)(1) coupled with RA determinations would be used to identify "substantial harm facilities"

and a subset of "significant and substantial harm facilities."

EPA's second approach was also based on the authority contained in CWA sections 311(f) (1) and (5). Under Option 2, all facilities regulated under 40 CFR part 112 would be required to prepare facility response plans; certain small, low-risk facilities with secondary containment structures would be allowed to prepare an abridged version of a response plan. Only "substantial harm facilities" would only be required to submit plans to EPA. "Significant and substantial harm facilities" would submit plans to EPA and have their plans reviewed and approved.

The Agency received numerous comments on the two options, with the vast majority favoring Option 1. Supporters of Option 1 stated that Option 2 would create too great a burden on facilities and EPA, in relation to the relatively low environmental benefits derived from planning. Commenters representing small, lower-risk facilities expressed concern that being required to prepare response plans would impose unnecessary financial burdens. In addition, commenters felt that 40 CFR part 112 was sufficiently protective of the environment for non-substantial-harm facilities. A small number of commenters representing both industry and environmental groups supported Option 2, stating that it most closely reflected the mandates of the OPA and that it would provide a more comprehensive emergency response planning network.

In today's final rule, EPA finalizes Option 1. The Agency believes that this option targets high-risk facilities in a cost effective manner that is nevertheless protective of the environment. Owners or operators of facilities covered by the Oil Pollution Prevention regulation must evaluate their facilities against a series of substantial harm screening criteria. Although EPA encourages all oil storage facilities under its jurisdiction to prepare oil spill response plans, owners or operators of those facilities not meeting the criteria provided in § 112.20(f)(1) are only required to prepare a facility response plan if the RA independently determines that the facility is a "substantial harm facility." Because of the size and diversity of the regulated community under EPA's jurisdiction pursuant to the OPA and the tight timeframe established by the OPA, EPA is implementing a substantial harm selection process with two components (i.e., published criteria and an RA determination). The published criteria are designed to capture the vast

majority of "substantial harm facilities." To simplify the process, EPA developed specific selection criteria to be applied in a consistent manner by all owners and operators. Nevertheless, EPA believes that there are facilities that do not meet the criteria in § 112.20(f)(1), but may, due to facility-specific or location-specific circumstances, pose sufficient risk to the environment to be designated as "substantial harm facilities." Accordingly, RAs, as the designated representatives of EPA, are granted authority to designate a facility on a case-by-case basis as a "substantial harm facility."

Substantial Harm Criteria

As required by § 112.20(f)(1) and the flowchart in Appendix C to 40 CFR part 112, a facility is a "substantial harm facility" if either of the following two criteria are met:

(1) The facility transfers oil over water to or from vessels and has a total oil storage capacity greater than or equal to 42,000 gallons; or

(2) The facility's total oil storage capacity is greater than or equal to 1 million gallons, and one or more of the following is true:

- The facility does not have secondary containment for each aboveground storage area sufficiently large to contain the capacity of the largest aboveground storage tank within each storage area plus sufficient freeboard to allow for precipitation;
- The facility is located at a distance (as calculated using the appropriate formula in Appendix C or a comparable formula) such that a discharge from the facility could cause injury to fish and wildlife and sensitive environments;
- The facility is located at a distance (as calculated using the appropriate formula in Appendix C or a comparable formula) such that a discharge from the facility would shut down operations at a public drinking water intake; or
- The facility has had a reportable spill greater than or equal to 10,000 gallons within the last 5 years.

A number of commenters suggested that EPA is attempting to regulate transportation-related facilities that are covered by USCG regulations. Several of these commenters stated that EPA's approach would result in redundant and conflicting regulations for such facilities.

The Agency considered these comments and decided to retain the over-water transfers criterion (§ 112.20(f)(1)(i)). The criterion was designed to identify as posing a risk of substantial harm to the environment those facilities that store oil above a certain quantity located in close

proximity to navigable waters. EPA is not attempting to regulate marine transfer operations. In 40 CFR 112.1, EPA clearly explains which facilities fall under its authority. The section states that EPA jurisdiction does not extend to transportation-related facilities. The Agency has the authority, however, to regulate the non-transportation-related storage component of facilities that may have a marine transfer component.

Several commenters indicated that the 42,000 gallon cutoff for transfers over-water is appropriate. Other commenters questioned the potential of a 42,000 gallon spill to cause substantial harm to the environment.

EPA has decided that non-transportation-related storage components of complexes should be regulated at a lower capacity threshold than storage facilities without an over-water transfer component (i.e., 42,000 gallons versus 1 million gallons), because the location of over-water transfer facilities poses a higher risk to navigable waters. Spills at such facilities are more likely to reach navigable waters than spills from facilities located further from navigable waters. Also, it is likely that a higher percentage of the total amount released will reach navigable waters at a facility directly adjacent to navigable waters than at a facility located further away. Data indicate that for oil discharges above 42,000 gallons, the number of incidents with reported effects including fishkills, wildlife damage, or fire is greater than for oil discharges below 42,000 gallons. At the 0.01 level of significance, the size of the release is related to the occurrence of reported effects. For certain release size thresholds other than 42,000 gallons, however, a similar statistically significant relationship could not be shown.²

EPA requested comment in the proposed rule on the appropriateness of the use of a proposed 1 million gallon or a 200,000 gallon size cut-off for total storage capacity to determine a threshold for substantial harm. (See § 112.20(f)(1)(ii).)

The Agency received numerous comments suggesting that the 1 million gallon cutoff was appropriate. A smaller number of commenters including other Federal government agencies and environmental associations, indicated that the size cut-off for substantial harm should be 200,000 gallons or lower.

² Study prepared for EPA titled "Analysis of Data Relating to Facility Size, Oil Discharges, and Environmental Effects." Available for inspection in the Superfund Docket, Room M2615, at the U.S. Environmental Protection Agency, 401 M Street, SW., Washington, DC 20460.

Advocates for a lower cut-off contended that small facilities with a high throughput may have a higher potential to cause substantial harm than large facilities with low throughput. These commenters also suggested that the OPA Conference Report indicated that the requirement to prepare and submit response plans should be applied broadly, because even small discharges from an onshore facility could result in substantial harm under certain circumstances.

Although EPA recognizes that large storage capacity is a substantial harm risk factor, the Agency also recognizes that the intent of OPA was not to exclude certain smaller facilities, such as those near public drinking water intakes or fish and wildlife and sensitive environments, from consideration as having the potential to cause substantial harm. EPA intends that the RA determination process be used to identify additional high-risk facilities that do not meet the criteria in § 112.20(f)(1) although nonetheless pose substantial harm.

The Agency decided to identify certain high-risk facilities that pose a threat of substantial harm because of their size in combination with facility-specific characteristics (i.e., secondary containment and spill history) or location-specific (i.e., proximity to fish and wildlife and sensitive environments and public drinking water intakes). The largest oil spills, which could pose the greatest risk to the environment, occur at large facilities. Data on the effects of spills from aboveground storage tanks indicate that when larger quantities of oil are discharged, fish and wildlife damage, off-site soil pollution, and property damage are greater than for smaller discharges.³ The Agency believes that regulatory coverage and protection of the environment will be ensured, since facilities that are smaller than 1 million gallons, but that could cause substantial harm because of their proximity to navigable waters or fish and wildlife and sensitive environments, could be selected under the RA's authority to require a facility to submit a response plan, regardless of whether the facility meets the criteria in § 112.20(f)(1) (although the RA considers these factors as part of the determination).

In addition, several commenters suggested that the average oil storage inventory of a facility should be used instead of capacity to determine the oil storage threshold for substantial harm. Commenters indicated that the normal amount of oil stored at a facility is often

less than the total capacity, because facilities are oversized to meet seasonal demands. Commenters also contended that tanks dedicated for standby service and tanks not in service should not be counted in determining a facility's capacity, and that certification methods could be employed to ensure that excess capacity is not being used.

In today's final rule, EPA retains capacity rather than inventory as the basis for assessing risk to the environment. The decision was based largely on the fact that substantial harm determinations using inventory would be difficult or impossible to enforce and might not accurately reflect the true worst case for the facility. EPA would be unable to inspect facilities often enough to ensure that their inventory is actually below the substantial harm threshold. Moreover, owners or operators would likely find it difficult to constantly track inventory to ensure that changes in inventory did not trigger additional regulatory requirements and at some time the tank could be filled to capacity. In addition, there is a need to maintain consistency in the Oil Pollution Prevention regulation, and the original regulation uses storage capacity for threshold determinations instead of using inventory. However, EPA has proposed in a separate rulemaking published on October 22, 1991 (58 FR 54612), to allow owners or operators to exclude permanently closed tanks (as defined in § 112.2 of the proposed rule published on October 22, 1991) from the total capacity of the facility for the purposes of the Oil Pollution Prevention regulation. If these changes are finalized, permanently closed tanks would not have to be considered in the substantial harm evaluation.

Several commenters argued that the 10,000 gallon reportable spill criterion (proposed at § 112.20(f)(ii)(D), 58 FR 8849) should be modified to allow a facility owner the opportunity to petition the RA for exclusion based upon modifications to the facility or to its spill prevention procedures made after the release.

EPA agrees that continuous improvements in spill prevention procedures are important and that owners and operators that have significantly upgraded their facility within five years of a spill greater than or equal to 10,000 gallons (by replacing tanks or adding secondary containment, for example) should be allowed to request exclusion from the substantial harm category.

The Agency includes a two-stage appeals process in § 112.20(i) of today's rule. The appeals process allows an owner or operator to petition the RA to

remove a facility from the category of substantial harm because of improvements at the facility that lead to greatly reduced risk to the environment. The appeals process is discussed in greater detail in the "Appeals Process" section of this preamble. Of course, even if a facility obtains relief through appeal, the RA still retains authority to require a Plan, under § 112.20(b) should the circumstances on which the relief was granted change in the future.

In the proposed rule, EPA provided formulas in Appendix C for owners or operators to determine appropriate distances to fish and wildlife and sensitive environments and drinking water intakes for purposes of evaluating the substantial harm criterion. EPA also proposed to allow the use of an alternative formula acceptable to the RA. EPA solicited data and comments on the appropriateness of the distance calculations in Appendix C for inland areas.

Several commenters supported the overall approach of using a calculated distance to define proximity. However, numerous commenters indicated that the formulas used to calculate the planning distances in Appendix C are too complex, cumbersome, or impracticable for general use.

The Agency does not agree. The planning distance formulas proposed in Appendix C are appropriate based on an evaluation of engineering principles and input from an interagency technical workgroup that included representatives from the Natural Resource Trustee agencies, as well as the agencies responsible for measuring river height and flow. The Agency's primary goal was to provide a series of formulas that were technically supportable. EPA has provided the least complex formulas that are still technically supportable. Moreover, EPA allows owners or operators to use comparable formulas to calculate appropriate distances provided that the formula is acceptable to the RA and they send supporting documentation on the reliability and analytical soundness of the formulas (see § 112.20(a)(3)).

Several commenters noted that the formulas proposed in Appendix C did not account for tides, currents, wind direction, and other weather-dependent flow rates. One commenter recommended that EPA use the USCG planning distances for discharges into tidal waters. To more accurately account for the range of movement of spilled oil in certain aquatic environments, EPA includes in Appendix C of today's final rule a section on oil transport in tidal influence areas as a separate type of calculation. EPA adopts the tidal

³ Ibid.

influence area criteria from the USCG's interim final rule for Marine Transportation-Related (MTR) Facilities (58 FR 7358, February 5, 1993).

Some commenters stated that the proposed response times in Table 3 of Appendix C for calculating the planning distances were inappropriate and would overpredict the area of the spill. Some commenters noted that actual response times could be considerably faster than those proposed because some facilities have their own response resources. Conversely, one commenter expressed concern that the response times are too short and do not account for adverse weather conditions or phased planning required for certain discharges. Other commenters noted that the proposed response times in Table 3 of Appendix C were inconsistent with the response times listed in Appendix F of the proposed rule for determining response resources for a worst case discharge and should be changed. No data were provided by commenters to support alternative response times for use in the distance calculations.

In today's rule, to clarify the information presented, EPA reformats Table 3 of Appendix C. EPA used the same geographic areas for facility location (i.e., higher volume port area, Great Lakes, and all other river and canal, inland, and nearshore areas) as those specified in the equipment appendix (Appendix E) to maintain consistency between different sections of the regulation and because the facility location directly impacts the arrival time of response resources.

The specified time intervals in Table 3 of Appendix C are to be used only to aid in the determination of whether a facility is a "substantial harm facility." Once it is determined that a plan must be developed for the facility, the owner or operator would consult Appendix E to determine appropriate resource levels and response times. The specified time intervals in Table 3 of Appendix C are less than the Tier 1 response times specified in Appendix E for the corresponding operating areas, because EPA assumes that, for purposes of determining whether a facility is a "substantial harm facility," no response planning has been done. This conservative assumption is only used for screening purposes and is not used for other aspects of the rulemaking. Owners or operators are reminded that EPA has included at § 112.20(i) of the final rule an appeals process for, among other things, the determination of substantial harm.

EPA believes that these times accurately estimate the times needed to respond to spills from EPA-regulated

facilities that have not pre-planned their response to spills (i.e., a facility owner or operator who has not pre-planned response activities would be able to contact a local spill response company, coordinate response actions, and deploy resources within 15 or 27 hours following discovery of the spill, depending on facility location). In general, facilities located in higher volume port areas have a higher density of response contractors and resources nearby. Therefore, EPA estimated a shorter time interval for these facilities compared with facilities located in all other operating areas.

One commenter noted an inaccuracy in the formula proposed in Attachment C-III of Appendix C of the proposed rule, Oil Transport on Still Water, (which converts an oil discharge volume into a surface area), when the volume of the spilled oil is converted to units other than cubic meters. In Attachment C-III of Appendix C of today's rule, EPA incorporates a conversion factor into the formula to address the inaccuracy by allowing facility owners and operators to directly input the worst case discharge volume in gallons and to obtain a spill surface area in square feet.

EPA requested comment on the appropriateness of using specified distances to environmentally sensitive areas (fish and wildlife and sensitive environments) in the substantial harm criterion. Many commenters suggested that EPA allow a facility owner or operator to use alternative methods or set distances to determine the appropriate distance from the facility for screening purposes. In today's rule, the Agency allows the use of formulas comparable to the Appendix C formula to calculate the planning distance to fish and wildlife and sensitive environments or public drinking water intakes (see § 112.20(a)(3) and § 112.20(f)(i) (B) and (C)), provided that facility owners and operators attach documentation to the response plan cover sheet on the reliability and analytical soundness of the comparable formula. EPA believes that calculating a planning distance using the formulas in Appendix C is more appropriate than using set distances to fish and wildlife and sensitive environments, because of the wide variety of site-specific conditions that may surround a particular facility and the various flow characteristics of water bodies.

In § 112.2 of the proposed rule, EPA defined "injury" as "a measurable adverse change, either long- or short-term, in the chemical or physical quality or the viability of a natural resource resulting either directly or indirectly from exposure to a discharge of oil, or

exposure to a product of reactions resulting from a discharge of oil." This definition is adopted from the Natural Resource Damage Assessments (NRDA) rule at 43 CFR 11.14(v) to assist facility owners and operators and RAs to determine whether a facility is located at a distance from fish and wildlife and sensitive environments such that an oil spill will cause "injury." The Agency requested comment on the appropriateness of defining "injury" in such a manner.

Several commenters stated that the definition of "injury" was so broad that it would include almost every facility that stores greater than or equal to one million gallons of oil and would result in excessive regulation, economic burden, and unnecessary lawsuits. Several commenters stated that EPA should limit the definition of "injury" so that facility owners and operators would only have to consider the potential to cause substantial harm, rather than the potential to cause any harm. Some commenters supported EPA's choice to incorporate a definition of "injury" that was already promulgated under other regulatory programs.

The Agency carefully considered comments on the definition of "injury" and consulted with NOAA and other Natural Resource Trustees agencies as to the merits of using an alternative definition. EPA maintains that the definition of "injury" is appropriate to assess substantial harm based on the extensive experience of Natural Resource Trustees in conducting evaluations of oil spill impacts on natural resources. Federal officials authorized by the President and the authorized representatives of Indian tribes and State and foreign governments act as public trustees to recover damages to natural resources under their trusteeship. Under the NCP, each trustee has responsibilities for protection of resources; mitigation and assessment of damage; and restoration, rehabilitation, replacement, or acquisition of resources equivalent to those affected. Because of the need to maintain consistency with the NCP, the Agency believes it is appropriate to use the definition of injury as established by the Natural Resource Trustees for this rule. In the preamble to the NRDA final rule (51 FR 27706), DOI indicates that the injury definition does not measure insignificant changes and that the definition relies on changes that have been demonstrated to adversely impact the resources in question, or services provided by those resources. EPA notes that there is nothing in the definition of "injury" that refers to the term harm (or

substantial harm), and that the term "injury" is not equivalent to these terms. The potential for a spill to cause any injury to a fish and wildlife and sensitive environment coupled with a total oil storage capacity of greater than or equal to 1 million gallons forms one of the substantial harm criteria. The criterion is designed as an indicator of the potential for a discharge from a facility to cause substantial harm to the environment.

The Agency requested comment on whether private drinking water supplies should be included in the criteria for determination of substantial harm. Some commenters supported the same treatment for private water intakes as for public water supplies if the private drinking water supplies are surface water intakes rather than groundwater wells. One commenter recommended that the RA consider private drinking water intakes in the determination of significant and substantial harm. Conversely, several commenters opposed the use of proximity to private drinking water intakes as a criterion for the substantial harm determination because most private drinking water intakes use groundwater. These commenters stated that such private intakes would be difficult to identify and locate. Two commenters suggested that EPA should define public drinking water intakes based on the definition of "public water systems" at 40 CFR 143.2(c) which excludes private water intakes.

EPA agrees with the commenters that most private drinking water intakes are difficult to identify and that most use groundwater. In today's rule, EPA does not include proximity to private drinking water intakes as a criterion for use by owners or operators to identify whether their facility is a "substantial harm facility." The RA, however, may consider a facility's proximity to private drinking water intakes in the determination of substantial harm or significant and substantial harm. In Appendix C to today's rule, EPA clarifies that public drinking water intakes are analogous to "public water systems" as defined at 40 CFR 143.2.

Several commenters opposed the requirements to calculate a planning distance to determine substantial harm if a facility has adequate secondary containment. Some commenters stated that the planning distance calculations should reflect the presence of secondary and tertiary containment and give credit for flow reduction measures and inspection programs. The Conference Report states that in defining a worst case discharge as the largest foreseeable discharge at a facility, Congress

intended to describe a spill that is worse than either the largest spill to date or the maximum probable spill for the facility type. (Conference Report No. 101-653, p. 147.) EPA interprets this language to mean that facility response plans should address cases where prevention measures could fail. Indeed, as detailed in the Technical Background Document⁴ supporting this rulemaking, in some cases, containment systems fail resulting in the discharge of oil to surface waters. Therefore, EPA maintains that proximity to fish and wildlife and sensitive environments and drinking water intakes must be considered despite the presence of secondary containment. This is an example of EPA's long established policy set forth in § 112.1(d)(1)(i), that the determination of proximity "shall be based solely upon a consideration of the geographical, locational aspects of the facility (such as proximity to navigable waters or adjoining shorelines, land contour, drainage, etc.) and shall exclude consideration of manmade features such as dikes . . ." It is also consistent with the statutory definition of worst case discharge for vessels, which includes the entire cargo tank capacity, whether or not the vessel has a double hull or other spill prevention measures.

RA Determination

Several commenters indicated their support for the provision in the proposed rule that states factors that the RA may use (§ 112.20(f)(2)) to determine whether a facility is a "substantial harm facility" irrespective of the substantial harm criteria in § 112.20(f)(1). One of these commenters suggested that this authority provides a system of checks and balances that should ensure that all facilities subject to the regulation will be required to comply. Other commenters expressed concern that the authority granted to the RA in § 112.20(b)(1) provides the RA with too much discretion in determining whether a facility is a "substantial harm facility." Some of these commenters suggested that the criteria used by the RA should be objective and consistent with the criteria used by owners or operators, and expressed confusion about the RA's authority to use "other site-specific characteristics or environmental factors" to select facilities. One commenter indicated that, as proposed, the RA would not be required to look at

the relationship of the specified criteria provided in § 112.20(f)(1) (e.g., the RA may consider that one criterion is enough to require a response plan to be submitted). One commenter felt that there is insufficient justification in the proposed rule for allowing the RA to select facilities that do not meet the criteria in § 112.20(f)(1).

EPA recognizes that RAs possess unique knowledge of Region-specific considerations that may have a bearing on whether to identify a facility as a "substantial harm facility." This RA authority is necessary, because the OPA through E.O. 12777 directs EPA ultimately to determine which facilities are "substantial harm facilities" and "significant and substantial harm facilities." As such, EPA retains the RA determination component of substantial harm selection in the final rule. In § 112.20(b)(1), EPA clarifies that if such a determination is made, the Regional Administrator shall notify the facility owner or operator in writing and shall provide a basis for the determination. Further, EPA notes that an appeals process is included to allow owners or operators the opportunity to challenge the RA's determination.

EPA is developing a guidance document to assist the RA with the identification of "substantial harm facilities." This guidance would outline specific screening procedures for use by RAs and will foster consistency in the way the substantial harm factors are applied. Further, RAs may use "Guidance for Facility and Vessel Response Plans: Fish and Wildlife and Sensitive Environments" (see Appendix E to this part, section 10, for availability) and information from the ACPs, when available, to identify fish and wildlife and sensitive environments as part of the substantial harm determination process.

Public Petitions

Section 112.20(f)(2)(ii) allows any person who believes that a facility may be a "substantial harm facility" to provide information to the RA through a petition for his or her use in determining whether the facility should be required to prepare and submit a response plan. This petition must include a discussion of how the substantial harm factors in § 112.20(f)(2)(i) apply to the facility.

Commenters in favor of allowing the public to have input in the determination of whether a facility is a "substantial harm facility" argued that the public should play a larger role in the selection and review process. However, many of these commenters argued that the proposed procedures are

⁴ The Technical Background Document to Support the Implementation of the OPA Response Plan Requirements, U.S. EPA, February 1993. Available for inspection in the Superfund Docket, room M2615, at the U.S. Environmental Protection Agency, 401 M Street, SW., Washington, DC 20460.

too burdensome for petitioners and that the facility owner or operator should have the responsibility to provide the necessary information. Commenters against allowing public petitions felt that the public petition process would be burdensome to EPA and the regulated community. Some commenters argued that the public does not have enough information to participate in the process.

In today's final rule, EPA establishes a process to allow the public the opportunity to provide input on a voluntary basis and welcomes such involvement. The Agency has decided to broaden the language in § 112.20(f)(2)(ii) from the proposed rule to clarify that other government agencies in addition to the public may provide information to RAs for the determination of substantial harm and that the RA shall consider such petitions and respond in an appropriate amount of time. The Agency believes that information provided by the public and other government agencies will assist rather than burden the RA. However, reviewing non-transportation-related facilities' response plans for approval is a governmental function delegated to EPA.

EPA wishes to clarify that it is not necessary for petitioners to determine quantitatively whether the facility meets one of the specific criteria in § 112.20(f)(1), but rather to provide a reasonable basis, from the factors in § 112.20(f)(2)(i), for asserting that the facility may pose a risk to the environment. A petition that fails to document the reasons why a facility should be classified as a "substantial harm facility" (e.g., the facility is near a drinking water supply or a priority sensitive environment listed in an ACP, the facility has a history of frequent spills or poor maintenance, etc.) may not be considered by the RA. However, petitioners would not have to provide detailed analyses and calculations. Other avenues of participation for the public in the response planning process include involvement in the ACP development process or participation in the LEPC.

Determination of Significant and Substantial Harm

As discussed in Section II.A of this preamble, RAs will review submitted plans to identify facilities that are "significant and substantial harm facilities" using the substantial harm factors set out in § 112.20(f)(2), and additional significant and substantial harm factors in § 112.20(f)(3).

Several commenters supported the proposed factors to determine

significant and substantial harm, indicating that EPA's use of risk-based screening criteria for substantial harm and significant and substantial harm determinations would reduce the prospect of excessive regulation for those facilities that do not pose a significant risk. Others indicated that EPA should define more clearly the criteria that the RA would use to determine significant and substantial harm to help ensure consistent application of the criteria both within an EPA Region and across EPA Regions. Several commenters suggested that EPA develop a screening mechanism that would provide the RA with some concrete guidelines to follow but still allow some latitude to exercise his or her expert judgment.

EPA Headquarters has provided written guidance⁵ to Regional personnel to assist them to determine which facilities are "significant and substantial harm facilities." The guidance provides a series of screens and instructions on how to evaluate the risk factors included at § 112.20(f)(3) of today's rule. In general, the screens provide various combinations of the risk factors that indicate increased levels of risk posed by a particular facility. For example, a facility that has an oil storage capacity greater than 1 million gallons and meets more than one of the risk-based criteria described in § 112.20(f)(1)(ii) (A) through (D) would be a "significant and substantial harm facility." The guidance document will help ensure a greater degree of consistency in Regional determinations of "significant and substantial harm facilities," but preserves the RA's ability to make case-by-case determinations based on unique facility- or location-specific concerns.

One commenter noted that EPA and the USCG chose different approaches for separating "substantial harm facilities" and "significant and substantial harm facilities." The commenter said that EPA's case-by-case determination of significant and substantial harm is more subjective than the USCG's, and has the potential for treating facility owners unequally.

EPA believes that its approach to determine substantial harm and significant and substantial harm is consistent with the OPA and does not diverge from the USCG's approach. The agencies' approaches are parallel in that each accounts for the higher risk of harm associated with transfers of high

volumes of oil over water (i.e., at locations adjacent to navigable waters). Because EPA regulates a larger and more diverse universe of facilities than the USCG, it would be difficult to publish a few general criteria that include the majority of high-risk facilities without also including many low-risk facilities. Therefore, as discussed previously, EPA decided to implement a substantial harm selection process with two components (i.e., published criteria and an RA determination). The OPA Conference Report explicitly states that significant and substantial harm criteria should include, at a minimum, oil storage capacity, location of fish and wildlife and sensitive environments, and location of potable water supplies. (H.R. Rep. No. 101-653, 101st Cong., 2d Sess. 1991 at p. 150.) These criteria are among the elements the RAs may consider, as set forth in §§ 112.20(f)(1) and (2) in making the significant and substantial harm determination. Further, where the Conference Report states that the criteria should not result in selection of facilities based solely on the size or age of storage tanks (See H.R. Rep. No. 101-653, 101st Cong., 2d Sess. 1990 at p. 150), it implies that these may be among the criteria. EPA does not agree that its case-by-case approach to identify a "significant and substantial harm facility" is overly subjective. As previously discussed, EPA has provided written guidance to Regions on the determination of significant and substantial harm to promote a more objective and consistent approach across all EPA Regions.

As the President's designee for regulating non-transportation-related onshore facilities, EPA has decided that Region-specific and facility-specific information is relevant in the determination of significant and substantial harm, because these elements may vary materially between Regions and facilities. For example, some facilities may be located on karst or unstable terrain because of the presence of underground streams or fault lines while other facilities are situated on more stable terrain where the risk of discharge may be lower.

Some commenters argued that the RA should review and approve plans submitted by "substantial harm facilities." They indicated that without such approval, these plans are likely to vary widely in their capacity to assure adequate response, and may even propose inappropriate use of dispersants or other treatment technologies.

EPA agrees that a review of plans from "substantial harm facilities" may be desirable. The OPA legislative

⁵ "Interim Guidance for the Determination of Significant and Substantial Harm," U.S. EPA, June 15, 1993. Available for inspection in the Superfund Docket, Room M2615, at the U.S. Environmental Protection Agency, 401 M Street, SW., Washington, DC 20460.

history indicates that criteria should be developed to select for review and approval plans for onshore facilities that could cause both significant and substantial harm. (See H.R. Rep. No. 101-653, 101st Cong., 2d Sess. 1990 at p. 150.) Congress expected that only some proportion of all submitted onshore facility response plans would be reviewed and approved. The highest priority for EPA's use of limited resources must be directed to those facilities on which Congress has focused. The Agency has and will continue to undertake a limited review of all plans to identify "significant and substantial harm facilities."

Submission and Resubmission Process

In §§ 112.20(a)(2)(ii) and (iii) of the proposed rule, EPA proposed that newly constructed or modified facilities, which become subject to the response plan requirements, must prepare and submit a response plan prior to the start of operations of the new facility or modified portions of the facility. For unplanned changes that result in a facility meeting the substantial harm screening criteria, EPA proposed to allow the facility owner or operator six months to prepare and submit a response plan. Several commenters urged EPA to give owners and operators time following completion of construction or modification to prepare and submit a response plan to EPA (implying that operations should be allowed to proceed before submission of the response plan). Most commenters felt that the six-month time period was sufficient for submitting a facility response plan after unplanned changes.

EPA does not require owners or operators to prepare and submit a plan before beginning or completing construction, but prior to the handling, storing, or transporting of oil. An owner or operator can prepare a plan during the construction phase, and complete and submit it before the facility is ready to come on line. EPA recognizes that changes to a facility's operations are common during the start-up phase of a new facility or new component of a facility. As stated in the proposed rule preamble (58 FR 8829), adjustments to the response plan can be made and submitted to the Agency after an operational trial period of 60 days. In today's final rule, the Agency adds this recommendation as a requirement at § 112.20(a)(2)(ii) and (iii) (§ 112.20(a)(2)(i)(B) and (C) of the proposed rule) and clarifies that adjustments to the plan to reflect changes that occur at the facility during the start-up phase must be submitted after an operational trial period of 60

days. EPA believes that this revision will ensure that the information contained in the plan is reflective of the normal operating conditions at the facility.

Section 311(j)(5)(C) of the CWA states that facility response plans must be updated periodically, and under section 311(j)(5)(D), EPA (as the President's delegatee) is required to review periodically, and, if appropriate, approve each plan for a "significant and substantial harm facility." In § 112.20(g), the proposed rule provided that owners or operators must review relevant portions of the NCP and applicable ACP annually and revise the response plan to ensure consistency with these plans. Section 112.20(g) of the proposed rule also proposed to require owners or operators to update their plans periodically when changes at the facility warrant such updates. In § 112.20(c), the proposed rule stated that the RA would review periodically response plans for "significant and substantial harm facilities." No other specific time periods for plan review were proposed, but in the preamble EPA solicited comments on how frequently the RA should review approved response plans.

Several commenters suggested that the rule should provide definite time periods for plan review, and some supported annual plan review by each facility. Many commenters had an opinion about the frequency of review of approved plans by the RA. Some supported a three-year time period, but the majority preferred five years. A few commenters expressed concern that specific reevaluation and reapproval intervals were not part of the proposed rule.

As described in the proposed rule, the owner or operator of a "substantial harm facility" must review the NCP and the ACP annually and revise the plan, if necessary, to be consistent with these documents. (See § 112.20(g)(2).) To clarify other review requirements, EPA has reorganized § 112.20(g) by removing the requirement for periodic review and update of the plan from paragraph (g)(1) and moving it to new paragraph (g)(3). In § 112.20(c) of the final rule, EPA revises paragraph (c)(4) to indicate that approved plans will be reviewed by the RA periodically on a schedule established by the RA provided that the period between plan reviews does not exceed five years. As discussed previously, RAs may choose to stagger such reviews to facilitate the review process. This five-year time period is consistent with the USCG interim final rule for MTR facilities. (See 33 CFR part 154.) Within the five-year period, EPA

will undertake a full reevaluation of the plan and, if necessary, require amendments. With regard to commenters' concerns that specific review intervals were not identified in the proposal, periodic review is expressly required by OPA, and EPA requested comment on what review interval would be appropriate (See 58 FR 8828).

Proposed § 112.20(d) would require owners or operators of "significant and substantial harm facilities" to revise and resubmit the plan for approval within 60 days of each material change at the facility. EPA revises § 112.20(d)(1) to indicate that owners or operators of all facilities for which a response plan is required ("substantial harm facilities" and "significant and substantial harm facilities") must revise the plan (and resubmit relevant portions of the RA) when there are facility changes that materially may affect the response to a worst case discharge. This change is necessary to ensure that EPA receives the necessary information to determine if "substantial harm facilities" undergo changes that could lead to their being designated as "significant and substantial harm facilities." The requirement for the RA to review for approval changes to plans for "significant and substantial harm facilities" that was proposed at § 112.20(d)(1) has been moved to new § 112.20(d)(4). Some commenters supported the 60-day time period, some thought it was too short, and others thought it was too long. One commenter pointed out that proposed § 112.20(d)(2) implied that material changes must be approved prior to being made. A few commenters requested clarification on which material changes trigger resubmission, and two commenters opposed resubmitting the entire plan, rather than a plan amendment. EPA requested comments on the proposal in § 112.20(d)(2) that owners and operators must submit changes to the emergency notification list to the RA as these changes occur, without resubmitting the plan for approval. Some commenters supported the proposal and others opposed it as an unnecessary burden.

As stated in the preamble to the proposed rule, a material change is one that could affect the adequacy of a facility's response capabilities. The material changes listed in the final rule are not inclusive, but are similar to those in the USCG regulations at 33 CFR 154.1065 for revisions that must be submitted by a MTR facility for inclusion in an existing plan or for approval. Because of the scope of facilities that EPA regulates, it is difficult to provide a definitive list of all

material changes that would be appropriate for regulated facilities under all circumstances. EPA's intent in including those changes listed in § 112.20(d)(1)(i) through (iv) is to describe those types of changes that are so significant in nature that they should trigger revision of the response plan and submission of the new information to EPA for review.

EPA clarifies in § 112.20(d) (1) and (2) that a change in the identity of an OSRO(s) is a material change requiring approval only if it results in a material change in support capabilities. However, a copy of any such change must be provided to the RA. Paragraph (d)(1)(v) specifies that any other changes that materially affect implementation of the response plan would trigger submission. This requirement allows the RA discretion to determine on a site-specific basis what changes may require submission because they materially affect implementation of the facility's response plan. The purpose of proposed § 112.20(d)(2) was to clarify that certain changes, such as revised names or telephone numbers, do not require RA approval but must be included in updating the plan. To avoid confusion, the word "prior" has been removed in the final rule. EPA does not intend minor changes to facility operations (e.g., small fluctuations in the number of product transfers) or response planning procedures (e.g., changes in the internal alerting procedures) to trigger submission.

The 60-day time period for submitting revised portions of the plan as a result of a material change is retained in the final rule. EPA believes the 60-day time period is reasonable and is consistent with the intent of the OPA, while giving facility owners or operators flexibility to comply with the response plan requirements in a timely manner. Furthermore, to ease the burden on facility owners or operators, EPA revises § 112.20(d)(1) in the final rule to indicate that the owner or operator must submit only relevant portions of the plan (i.e., those portions that were revised to reflect the material change) and not the entire response plan. This change will facilitate the process to revise and submit required information within 60 days of the change. RAs will review submitted information for approval and notify owners or operators within a reasonable time if the plan amendments are unacceptable.

Appeals Process

In the proposed rule, the Agency requested comment on allowing the owner or operator to participate in and appeal the RA's determination of

substantial harm and significant and substantial harm, and the disapproval of a facility response plan.

Several commenters were concerned that lack of an appeals process would deprive facility owners or operators of their due process. Many commenters supported a formal appeals process, while others stated that an exchange of information before an appeal would assist the RA in making a final determination. Others preferred a combined appeals process, with the first stage of an appeal involving an informal exchange of information followed, if necessary, by a formal appeals process (such as described in § 112.4(f)) to ensure due process. Several commenters requested a process by which a facility could be removed from the category of substantial harm or significant and substantial harm because of improvements at the facility that lead to reduced risk to the environment.

EPA recognizes the importance of allowing facility owner or operators to present relevant information, and therefore includes in § 112.20(i) of today's final rule a two-part appeals process. The first stage allows a facility owner or operator to submit to the RA a request for reconsideration that includes information and data to support the request. The RA would evaluate the submitted information and reach a decision on the facility's risk classification or the status of plan approval (including whether changes to a facility's worst case discharge planning volume are necessary for approval) as rapidly as possible. EPA expects that the request for reconsideration process will be the primary mechanism to address disputes over EPA decisions. However, a follow-up process will also be available for appeal of the RA's determination to the Administrator of EPA using procedures similar to those in § 112.4(f).

The appeals processes described in the preceding paragraph are also available to owners or operators of facilities that have been classified as substantial harm or significant and substantial harm for some time and who believe that, because of an unplanned event (e.g., a significant change to the ACP's list of protection priorities) or improvements at the facility (e.g., construction of adequate secondary containment or an improved spill history), the facility now poses a lower risk of harm to the environment.

Certification of Non-Substantial Harm

EPA proposed in § 112.20(e) to require that owners or operators of those regulated facilities not submitting response plans complete and maintain

at the facility, with the SPCC Plan, a certification form that indicates that the facility was determined by the owner or operator not to be a "substantial harm facility" as indicated by the flowchart contained in Appendix C.

Several commenters supported EPA's proposal to allow facilities to self-certify when they do not meet the criteria for substantial harm and agreed that submission of the form to EPA was unnecessary. However, other commenters were concerned that there is no outside review or verification of a facility owner's or operator's evaluation of the substantial harm criteria. Those commenters suggested that the rule be amended to require officials from EPA or some other agency (e.g., the State water pollution control agency, the SERC, the LEPCs, or the natural resource management agencies) review determinations and calculations made by facility owners or operators who have not submitted facility response plans. Others requested that EPA provide more assistance to ensure that certification is done properly (e.g., a hotline or guidance manual). Several commenters indicated that completing the form was burdensome, especially to small facilities, and questioned the benefits of completing and maintaining the form.

Today, EPA finalizes at § 112.20(e) the requirement to complete and maintain a certification form as it was proposed in the proposed rule. EPA maintains that it is not necessary to submit the form to the RA or other government officials. EPA believes that the certification form does not involve a major effort to complete and has value as an enforcement tool and as a record of awareness of response planning requirements. Facility owners or operators can, if necessary, consult with appropriate Regional personnel or the SPCC Information Line (202-260-2342) for additional information on evaluating the criteria in § 112.20(f)(1) and completing accompanying certification form.

Agency agrees that verification of a facility's determination may sometimes be appropriate. EPA anticipates that during facility inspections, Regional personnel will review the certification form and other information for facilities without a response plan.

Model Response Plan

Today, EPA finalizes the model response plan in Appendix F (which has been relabeled from the proposed rule where it was called Appendix G) with a series of minor changes. These changes are to clarify certain provisions, improve the organization of the model

plan, and ensure greater consistency with the response plan rules of other Federal agencies.

In the proposed rule, EPA proposed that owners or operators identify and describe the duties of the facility's "emergency response coordinator" in the facility response plan. This person was to be the "qualified individual" required by section 311(j) of the CWA, and would have full authority, including contracting authority, to implement removal actions. Proposed § 112.20(h)(3)(ix) set out the duties of the emergency response coordinator. The USCG's interim final rule (58 FR 7330, February 5, 1993) requires the owner or operator to name a "qualified individual" who has the duties of EPA's "emergency response coordinator." Several commenters suggested EPA and the USCG adopt uniform terms in their final rules for identifying this individual. One commenter specifically suggested that EPA replace "emergency response coordinator" with the USCG's term, "qualified individual."

EPA agrees, and has changed the term "emergency response coordinator" wherever it appears in today's rule to "qualified individual." Although EPA is not amending the necessary qualifications or description of duties for the qualified individual, the Agency stresses that the qualified individual should be able to respond immediately (i.e., within 2 hours) to a spill at the facility.

In section 1.1 of Appendix G of the proposed rule (Appendix F in the final rule), the Agency indicated the Emergency Response Action Plan (ERAP) shall include a description of immediate actions, and referenced section 1.7 of the model plan. Several commenters requested clarification on what should be described in this section. To clarify what constitutes a description of immediate actions, EPA has changed the reference for immediate actions to section 1.7.1, which focuses on the implementation of response actions. For the purpose of the ERAP, immediate actions include, at a minimum: (1) Stopping the flow of spilled material (e.g., securing pumps, closing valves); (2) warning personnel; (3) shutting off ignition sources (e.g., motors, electrical circuits, open flames); (4) initiating containment; (5) notifying the National Response Center; and (6) notifying appropriate State and local officials. A sample form for describing immediate actions in the plan is also included in Appendix F.

In § 112.20(h)(3)(vii) of the proposed rule, EPA proposed to require facility owners or operators to include plans for evacuation of facilities and surrounding

communities to ensure the safety of individuals that are at high risk in the event of a spill or other release (this information was also to be included in the emergency response action plan). Several commenters stated that requiring facilities to assume primary responsibility for the development of evacuation plans for the surrounding community is unreasonable. These commenters stated that Federal, State, and local agencies, which have expertise in emergency evacuation, are responsible for the preparation and implementation of community evacuation plans.

EPA does not intend for facilities to develop community evacuation plans, but any plans affecting the area surrounding the facility must be referenced in the response plan. Sections 112.20 (h)(1)(vi) and (h)(3)(vii) are revised to clarify the requirement to reference community evacuation plans. Facility owners or operators should contact the Fire Department and LEPC to assure coordination with existing community evacuation plans.

In section 1.4.3 of proposed Appendix G (Appendix F in this final rule), EPA recommended that facility owners or operators complete a quantitative analysis of spill potential to aid in developing discharge scenarios and response techniques, and consider factors such as tank age, spill history, horizontal range of a potential spill, and vulnerability to natural disasters. Several commenters stated that the analysis was unnecessary and burdensome, and requested guidance about the level of effort the Agency expects to be expended to analyze a facility's spill potential (e.g., tank by tank evaluation, general site study).

In response to commenters' concerns, EPA has reworded section 1.4.3 of the appendix by deleting the word "quantitative" from the description of the spill probability analysis. This should decrease the burden on the regulated community by giving facility owners and operators the flexibility to determine what factors to consider and allowing them to perform a more general analysis, including quantitative and/or qualitative factors, using the information in section 1.4.3 of the model plan as a guide.

In section 1.8 of Appendix G of the proposed rule, EPA proposed to require facilities to maintain training and meeting logs in the response plan to aid facility owners, operators, and employees in spill prevention awareness and response requirements. Several commenters stated that including logs within the response plan would detract from their effectiveness.

In response to these commenters' concerns, the Agency indicates in § 112.20(h)(8)(iv) and in Appendix F of the final rule that logs may be included in the facility response plan or kept as an annex to the plan.

To facilitate the review of response plans for complexes, EPA requires in today's final rule that the owner or operator of a complex identify, on the facility diagram submitted with the response plan, the interface between portions of the complex that are regulated by different agencies. (See section 1.9 of Appendix F.) EPA requires this interface to be consistent with the USCG's interim final rule for MTR facilities.

Facility Response Plan Certification

In Section III.G of the preamble to the proposed rule, EPA requested comment on a requirement for certification by a Registered Professional Engineer (PE) for certain portions of the response plan, such as determination of worst case discharge. EPA also solicited comment on which professions may be suitable to evaluate and certify the contents of the response plan if EPA determines a certification requirement is appropriate. In particular, the Agency requested comment on the suitability of Certified Hazardous Materials Managers to perform the plan certification function.

The Agency received many comments on the issue of certification of response plans. In general, commenters expressed support for the rulemaking effort and the certification provision, and sought EPA's consideration on the suitability of different professions to review and approve response plans. Among the remaining commenters (those not affiliated with an environmental professional organization), almost two-thirds felt that certification was unnecessary and cited cost, PE's unfamiliarity with the facility, and EPA review as the major reasons for their opposition. Some commenters indicated that, at most, certification should be limited to construction or structural aspects of the facility described in the response plan, because oil spill response training and knowledge is not widespread among many environmental professionals. Others said they would favor certification only if an in-house employee could perform the function. In addition, many commenters who supported the certification provision requested that EPA develop uniform standards for certifying, ranking, and approving the use of different types of environmental professionals.

The Agency considered these comments and has decided not to require plan certification by an outside

professional in the final rule. Facility response plans from "significant and substantial harm facilities" are already subject to review and approval by EPA. In addition, facility owners and operators are required to certify (on the cover sheet in Appendix F) that the information contained in the plan is accurate. EPA believes that this certification will be sufficient to ensure accurate and comprehensive implementation of the response plan requirements and that additional certification would be unnecessary and burdensome to the regulated community. This approach is consistent with the approaches taken by RSPA and the USCG in implementing facility response plan requirements.

Contract or Other Approved Means

In § 112.2 of the proposed rule, EPA defined "contracts or other approved means" to include written contractual agreements with an OSRO(s), written certifications, active membership in an OSRO, and other specific arrangements approved by the RA. EPA's intent in including the fourth option was to allow the RA discretion to accept alternate arrangements not covered by the first three mechanisms that would also satisfy the OPA requirement to ensure the availability of private personnel and equipment necessary to respond, to the maximum extent practicable, to a worst case discharge.

The comments addressing this issue were mixed. Commenters, in general, requested that EPA's definition more closely mirror the definition used in the USCG's interim final rule for MTR facilities. (See 33 CFR 154.1028.) Some commenters requested that EPA adopt, in addition to the proposed language, several additional methods that the USCG included in its definition. One method provides an alternative for use by all MTR facilities to ensure the availability of response resources. The method requires a document that identifies the resources of the OSRO(s) capable of being provided within stipulated response times in the specific geographic area; includes the parties' acknowledgement that the OSRO(s) will commit the resources in the event of a required response; allows the USCG to verify the availability of documented resources; and is referenced in the response plan. Another USCG method, acceptable for "substantial harm facilities" and MTR facilities that handle, store, or transport Group 5 persistent oils and non-petroleum oils, permits the identification of an OSRO(s) and resources willing to respond within stipulated response times in the specified geographic area. This method

does not require a contract between the facility and OSRO(s), but requires the OSRO(s) to supply a letter to the facility stating its willingness to respond to a discharge at the facility and that it has the specified resources. Commenters explained their preference for these two methods to ensure consistency with the USCG's interim final rule for MTR facilities, avoid different procedures for complexes, address small contractor financial concerns, and reduce confusion among the regulatory agencies reviewing plans to ensure response contractor capabilities.

Several commenters supported EPA's proposed definition citing its greater simplicity and flexibility; however, these commenters stressed that the RA be granted broad flexibility in exercising his or her authority to determine appropriate "other approved means."

In today's final rule, the definition of "contract or other approved means" has been revised to replace the term "response contractor" with the term "oil spill removal organization(s)" to match the USCG's language. For clarification, EPA also adds a definition for "oil spill removal organization" in § 112.2 of today's rule. The definition is similar to that used in the USCG's interim final rule for MTR facilities. An OSRO is defined as an entity that provides response resources, and includes any for-profit or not-for-profit contractor, cooperative, or in-house response resources that have been established in a geographic area to provide required response resources. These changes do not alter the meaning of the term "contract or other approved means" as originally proposed. The EPA definition includes four means that owners or operators can use to ensure the availability of required response resources. The first is a written contract with an OSRO(s) (i.e., a response contractor). The second is for the facility owner or operator to provide and operate facility-owned equipment. The third is active membership in an OSRO(s) (i.e., a local or Regional oil spill response cooperative).

Finally, EPA's fourth means has the flexibility inherent in the USCG's previously referenced methods in that it allows all regulated facilities to propose other means of demonstrating adequate response capability, subject to approval by the appropriate RA. Among the kinds of instruments which an RA might find a sufficient means of ensuring availability of required resources is a document that incorporates the elements set out in the USCG's interim final rule for MTR facilities at 33 CFR 154.1028(a)(4) (i) through (iii). For example, an RA might find a document

sufficient to ensure availability if it identified the response resources being provided by the OSRO(s); set out the parties' acknowledgement that the OSRO(s) intends to commit the resources in the event of a response; permitted EPA to verify the availability of resources through tests, inspection, and drills/exercises; and is referenced in the response plan.

Maximum Extent Practicable

The OPA requires that a facility response plan be developed to respond to the maximum extent practicable, to a worst case discharge of oil. The Conference Report states that to determine maximum extent practicable, the President should "consider the technological limitations associated with oil spill removal, and the practical and technical limits of the spill response capabilities of individual owners and operators." (H.R. Rep. No. 101-653, 101st Cong., 2d Sess. 1991 at p. 150.)

In § 112.2 of the proposed rule, EPA proposed to define "maximum extent practicable" as "the limitations used to determine oil spill planning resources and response times for on-water recovery, shoreline protection, and cleanup for worst case discharges from onshore non-transportation-related facilities in adverse weather. The appropriate limitations for such planning are available technology and the practical and technical limits on an individual facility owner or operator."

Numerous commenters objected to EPA's definition. Many of the commenters argued that EPA did not consider economic limits in defining maximum extent practicable, and that Congress intended for EPA to evaluate costs and other economic considerations in defining the term. Two commenters suggested that EPA amend the term to include the word "economic." Another commenter stated that Congress intended for the Agency to apply the concept based on what is technologically and economically feasible for an individual owner or operator, and EPA was remiss in failing to engage the industry in a discussion of costs from the industry's perspective. This last point, they argued, was compounding the USCG's failure to engage the industry in a "full-blown discussion of costs" during its Negotiated Rulemaking on the vessel oil response plan rule. The commenter argued further that in determining "maximum extent practicable" for owners and operators, EPA was required to factor in public response resources.

One commenter said that there are so few oil spill response organizations

available that the demand for their services to meet worst case discharge planning volumes would place an undue financial burden on facility owners and operators who must procure those services. Another commenter suggested a revision to the definition to delegate authority to the RA to decide what "maximum extent practicable" means. Some said that EPA should revise the definition to make it more consistent with the USCG's.

EPA has factored costs into the definition of maximum extent practicable through procedures contained in Appendix E to today's rule to be used by owners or operators to determine appropriate levels of response resources. (As discussed later in this preamble, the requirements in Appendix E were prepared from a similar set of instructions developed by the USCG.) For example, in determining what is "practicable," Appendix E sets caps for the facility on the amount of response resources for which a facility owner or operator must contract or ensure by other approved means. These caps reflect the limits of currently available technology and private removal capabilities, and will be adjusted upward to reflect anticipated increases in private removal capabilities through the year 2003. Appendix E also includes tiered arrival times for response resources so that a facility owner or operator does not have to plan for all required resources to be located at the facility or in its immediate area.

With regard to the involvement of Federal response resources in determining maximum extent practicable, EPA notes that a major objective of the OPA amendments to section 311(j)(5) of the CWA is to create a system in which private parties supply the bulk of response resources needed for an oil spill response in a given area. A worst case discharge will likely require the use of both public and private resources. However, section 311(j)(5)(C)(iii) states specifically that a facility owner or operator must identify and ensure by contract or other approved means the availability of private personnel and equipment necessary to remove to the maximum extent practicable a worst case discharge. EPA cannot, in defining "maximum extent practicable," abrogate this statutory requirement.

In response to the comment that the rule will benefit response contractors at great cost to owners and operators, EPA notes that the statute requires owners and operators to ensure the availability of private resources. In setting out four ways to ensure availability (only one of which is a written contractual

agreement), EPA has attempted to give private parties the maximum possible flexibility to construct arrangements to meet this statutory objective.

EPA agrees with the commenters who suggested that the definition of maximum extent practicable be made more consistent with the USCG's and that the RA have the ability to evaluate "maximum extent practicable" in a given Region. Therefore, in § 112.2 of the final rule, the definition of "maximum extent practicable" is revised to be more consistent with the USCG's and to include a provision on RA authority.

Other Definitional Changes

Commenters suggested that EPA and the USCG should better coordinate certain parts of their respective regulations to allow complexes to follow a single set of requirements. As discussed in Section I.C of this preamble, EPA and the USCG participated in a series of cross-agency meetings to facilitate consistency in response plan requirements. In today's final rule, EPA has revised the definitions of "adverse weather" and "contracts or other approved means" in § 112.2 of the rule; added a definition of "oil spill removal organization" in § 112.2 of the rule; and revised "Great Lakes," "higher volume port area," and "inland area" in Appendix C of the rule to more closely follow the USCG's definitions in its interim final rule for MTR facilities. In addition, EPA adds to Appendix E definitions for the terms "nearshore," "ocean," "operating area," and "operating environment," also adopted from the USCG's interim final rule for MTR facilities. These revisions are conforming changes and are for the most part non-substantive. A summary of the changes follows. (The definitions of "contracts or other approved means" and "oil spill removal organization" are discussed elsewhere in this preamble.)

- The definition of "adverse weather" is revised to include references to weather conditions such as wave height, ice conditions, temperatures, weather-related visibility, and currents within the area in which the equipment is to function. These changes result in an expanded definition of "adverse weather" that is as consistent as possible with the USCG definition of the same term, that incorporates relevant weather conditions which contribute to adverse weather, and that maintains a standard against which to evaluate weather conditions.

- A definition of "oil spill removal organization" (OSRO) has been added, because this term is included in the

definition of "contract or other approved means."

- The definition of "Great Lakes" is revised to match the USCG's definition.

- The definition of "higher volume port area" was revised to add several port areas contained in the USCG's definition.

- The definition of "inland area" was changed to remove rivers and canals from the water bodies that are excluded in the USCG's definition.

- The definition of "nearshore" was added to ensure greater consistency with the USCG's interim final rule for MTR facilities and facilitate the use of Appendix E.

- The definition of "ocean" as it applies to facilities in EPA's jurisdiction was added to be consistent with the USCG's interim final rule for MTR facilities and facilitate the use of Appendix E. "Ocean" describes the operating environment normally found in nearshore areas.

- The definition of "operating area" was added to be consistent with the USCG's interim final rule for MTR facilities and facilitate the use of Appendix E. "Operating area" means the geographic location in which a facility is handling, storing, or transporting oil. The four operating areas applicable to EPA's jurisdiction are Rivers and Canals, Inland Areas, Nearshore, and Great Lakes. The operating area classification may not be changed by the OSC and the boundaries of each area are specified in their definition.

- The definition of "operating environment" was added to be consistent with the USCG's interim final rule for MTR facilities and facilitate the use of Appendix E. "Operating environment" means the conditions in which the response equipment is designed to function. The four operating environments are Rivers and Canals, Inland Areas, Great Lakes, and Oceans. The OSC may reclassify a specific body of water in the ACP to better reflect conditions expected to be encountered in an operating area during response activities.⁶

⁶ The conditions present in each operating environment (i.e., significant wave height and sea state) are listed in Table 1 of Appendix E and will normally be conditions present in each corresponding operating area. For example, an owner or operator whose facility is located on a river (i.e., the Rivers and Canals operating area) will normally have to plan to respond to a spill using equipment capable of functioning in the Rivers and Canals operating environment, (i.e., the conditions described by a significant wave height of less than or equal to 1 foot or a sea state of 1). The Ocean operating environment normally describes the conditions present in the Nearshore operating area (i.e., significant wave height of less than or equal to 6 feet and a sea state between 3 and 4). While

These changes should eliminate confusion on the part of owners or operators of complexes in complying with the response plan requirements contained in today's rule, and facilitate the development of a single plan with separate sections addressing each component of a complex regulated by more than one agency.

Equipment Requirements

In Appendix F to the proposed rule (Appendix E in this final rule), EPA provided methodologies to assist facility owners and operators in determining the types and amounts of equipment and response times that are needed to respond to spills of a given size. As discussed previously, the methodologies were prepared from similar instructions developed by the USCG and adapted to reflect the type and location of facilities that EPA regulates. The Agency requested comment on the procedures contained in Appendix F of the proposed rule for the determination and evaluation of required response resources. In addition, EPA solicited comment on whether the methodologies are appropriate for planning for inland spills by owners or operators of non-transportation-related onshore facilities.

Numerous comments were received on proposed Appendix F (Appendix E in this final rule). In general, commenters requested that EPA and the USCG work toward facilitating a greater degree of consistency in their respective sets of equipment requirements. As discussed previously, a series of cross-agency meetings were conducted to resolve differences between the approaches taken by the various Federal agencies implementing OPA requirements.

For reasons discussed earlier in this preamble, proposed Appendix F has been renamed and relettered as Appendix E of today's final rule and the mandatory nature of certain requirements has been clarified while preserving flexibility for facilities with unique circumstances. Other changes (including the definitional changes already discussed) have been made to ensure consistency with Appendix C of the USCG's interim final rule for MTR facilities. Consistency between the rulemakings will help the regulated community to develop and implement response plans efficiently. A discussion of the major issues raised by

commenters on the equipment appendix follows.

In the table in section 5.3 of the appendix, tiered response times for facilities in the Great Lakes operating area were grouped with the response times for the Higher Volume Port operating areas. Commenters stated that EPA's tiered response times should match those used by the USCG. To maintain consistency with the USCG, EPA has changed the Table in section 5.3 of Appendix E. The Great Lakes have been grouped with all other rivers, inland, and nearshore areas into Tiers 1, 2, and 3 with response times of 12, 36, and 60 hours, respectively. Conforming changes are also included in section 7.2.3 of Appendix E.

Because of the frequency of spills to shallow waters and the need for specialized recovery devices in these environments, EPA adds section 5.6 to Appendix E. This section was adopted from the USCG's interim final rule for MTR facilities and requires facility owners or operators to ensure that resources are available for shallow water response activities. The provisions indicate that at least 20 percent of the on-water response equipment should be identified for operating in water 6 feet deep or less.

In the proposed rule, EPA proposed that owners or operators consider four groups of oil (the heavier oils were included in the Group 4 oils) when evaluating response resources. Commenters stated that EPA should adopt a separate category for oils with a specific gravity greater than or equal to 1.0 and provide appropriate guidelines to determine response resources for discharges of such oils. In today's rule, EPA adds a category for Group 5 oils to the definition of "persistent oils." Group 5 oils are oils with a specific gravity of greater than or equal to 1.0. Because Group 5 oils sink or remain suspended beneath the water's surface, the resources and techniques that needed to respond to discharges of these types of oils are different from those used to respond to discharges of oils that float on water. Response resource requirements and the specific conditions that owners and operators need to consider when planning to respond to discharges of Group 5 oils are added in section 7.6 of Appendix E. To ensure adequate response resource planning, EPA clarifies in section 7.2.2 of Appendix E that, in order to identify the required amount of response equipment, facilities handling, storing, or transporting some combination of Group 1 through 4 oils (e.g., a Group 1 oil and a Group 3 oil) must do separate

calculations using the worksheet in Attachment E-1 for each oil group on site except for those oil groups that constitute 10 percent or less by volume of the total storage capacity at the facility. Owners or operators must then select the oil group that results in the largest on-water recovery volume to plan for the amount of response resources for a worst case discharge. (Group 5 oils should be addressed separately using the separate procedures to determine response resources that are contained in Appendix E.)

In the proposed rule, EPA proposed that owners or operators of facilities that handle, store, or transport non-petroleum oils calculate an amount of response equipment by grouping all non-petroleum oils as Group 4 oils and using the associated emulsification factors and other parameters listed in the tables of Appendix F of the proposed rule. Some commenters suggested that EPA establish separate response plan requirements and selection criteria for owners or operators of facilities that handle, store, or transport non-petroleum oils. These commenters argued that fundamental chemical and physical differences between petroleum and non-petroleum oils indicate the necessity for different response techniques and equipment. Two of the commenters stated that USCG regulations create separate response plan development and evaluation criteria for non-petroleum oils, and one commenter recommended that EPA adopt the USCG criteria. Some commenters stated that for the purposes of this rulemaking, the term "oil" should exclude non-petroleum oils.

EPA has determined that for the purposes of section 311(j) planning, the OPA includes non-petroleum oils. The Agency notes that the definition of "oil" in the Clean Water Act includes oil of any kind, and that EPA uses this broad definition in 40 CFR part 110, Discharge of Oil.

EPA agrees with commenters that certain equipment and strategies used for petroleum oil spills may be inappropriate for non-petroleum oil. The Agency further agrees that making its regulations match the USCG's as nearly as practicable will reduce the prospects for confusion among facility owners or operators—especially owners or operators of complexes. Reducing confusion, in turn, increases compliance at the least possible cost and expedites the development of a national oil response planning program. Therefore, the Agency has decided to adapt for non-transportation-related facilities under EPA jurisdiction, the USCG

the OSC can not change the operating area, he or she may change the operating environment for a given location if it is determined that the new operating environment better describes the conditions present at that location. Any reclassification of a specific location must be done in the appropriate ACP.

approach to determine response resources for non-petroleum oils.

This adaptation means that in calculating required response resources for non-petroleum facilities, an owner or operator will not use emulsification or evaporation factors in Table 3 of Appendix E. Rather, these facility owners or operators must: (1) Show procedures and strategies for responding to the maximum extent practicable to a worst case discharge; (2) show sources of equipment and supplies necessary to locate, recover, and mitigate discharges; (3) demonstrate that the equipment identified will work in the conditions expected in the relevant geographic areas, and respond within the required times (according to Table 1 of Appendix E); and (4) ensure the availability of required resources by contract or other approved means. At such time as there are results from research on such factors as emulsification or evaporation of non-petroleum oil, additional changes may be made to the rule for response resources for response planning for non-petroleum oil facilities. Section 7.7 has been added to Appendix E to reflect these changes.

Several commenters noted that the statutory definition of oil includes a wide variety of oils, such as petroleum oils and non-petroleum oils that can affect the environment by a variety of mechanisms. Response strategies associated with non-petroleum oils may differ from those associated with petroleum oils. Therefore, EPA is providing these definitions to assist owners or operators in distinguishing between oil types.

- Petroleum oil means petroleum in any form including crude oil, fuel oil, mineral oil, sludge, oil refuse, and refined products.

- Non-petroleum oil means oil of any kind that is not petroleum-based. It includes animal fat, vegetable oil, and other non-petroleum oil.

- Animal fat means a non-petroleum oil, fat, or grease derived from animal oils not specifically identified elsewhere.

- Vegetable oil means a non-petroleum oil or fat derived from plant seeds, nuts, kernels or fruits not specifically identified elsewhere.

- Other non-petroleum oil means a non-petroleum oil of any kind that is not generally an animal fat or vegetable oil.

Additional changes made to the equipment requirements to match the USCG's requirements are as follows:

- Section 2.3.1 is added. This section indicates that the RA may require owners or operators to identify in the facility response plan boom that meets

the boom criteria in Table 1 of Appendix E. If documentation that the boom meets the Table 1 criteria is unavailable, the RA may require that the boom be tested in accordance with ASTM standards.

- The on-water speed for determining the travel time to the site of the discharge was adjusted from 10 knots to 5 knots in section 2.6 of Appendix E.

- A provision was added to section 3.3.1 of Appendix E for complexes with a marine transfer component to provide an amount of boom that is equal to two times the length of the largest vessel that transfers oil at the facility or 1,000 feet, whichever is greater. For complexes, the non-transportation-related portion of the facility response plan need not include reference to boom length if it is already referenced in the MTR portion of the facility response plan.

- Language was added to section 5.4 of Appendix E to indicate that facility owners or operators whose planning volume exceeds the caps in Table 5 of Appendix E must identify sources of additional equipment; and clarify that facility owners or operators who have identified USCG-classified OSROs are not required to list specific quantities of available equipment in their response plan.

- A provision was added to section 6.2 of Appendix E to allow the RA to assign lower efficiency factors to equipment when warranted.

- A provision was added to section 6.3 of Appendix E to allow the facility owner or operator to use equivalent tests of effective daily recovery rates when approved by EPA.

- Section 6.4 has been renumbered to 6.3.2 and provisions added for RA determination of acceptable alternative efficiency factors and effective daily recovery capacity.

- Sections 7.4, 7.6.3, and 7.7.5 are added to clarify that owners or operators must identify firefighting resources in addressing response resources under the plan.

- Criteria for containment boom in the ocean operating environment were added to Table 1 of Appendix E.

EPA considered whether to adopt language in Appendix E to address the use of dispersants and in-situ burning. Some commenters suggested that the Agency address these response measures using Section 8 of the USCG's Appendix C as a model. In today's final rule, EPA has included some information from Section 8 of the USCG's Appendix C to address the use of dispersants listed on the NCP Product Schedule. Use of dispersants during spill response will be based on the

provisions of the NCP⁷ and applicable ACP. The USCG permits a limited offset against required response resources if the use of dispersants or in-situ burning is part of the response strategy. EPA will not include such an offset for non-transportation-related facilities for two reasons. To date, the ACPs do not allow use of dispersants in inland waters and a facility under EPA jurisdiction in a coastal area cannot use dispersants given the shallow water depth.

Verification of Response Capability

In the preamble to the proposed rule, EPA stated that it may use various methods (including an OSRO certification or approval program) during the plan review process to evaluate the availability and adequacy of personnel and equipment to respond to a worst case discharge, to the maximum extent practicable. The Agency has reviewed the USCG OSRO classification process. This is a voluntary process whereby OSROs can submit a description of their resources and capabilities to the USCG National Strike Force Coordination Center and be evaluated for classification according to their capabilities. This process assists vessel and facility owners trying to locate appropriate resources, and simplifies the planning process by allowing these owners (who identify an OSRO(s) to meet response resource requirements) simply to list the OSRO(s) and its classification in the response plan, rather than list equipment recovery, containment, and storage resources in the plan. The Agency specifically requested comments on the criteria to evaluate OSRO agreements, a mechanism for approving OSROs, and the advisability of establishing an OSRO approval process.

Most commenters agreed that EPA should establish its own OSRO classification process or use the USCG's classification process to streamline the development of facility response plans. Many of these commenters agreed that EPA should coordinate with the USCG in planning such a program, if it is to be different from the USCG's classification process. Several commenters specifically mentioned that details of response resources should not be required within the response plans. These commenters felt that this information would distract from the emergency purpose of the document. A few commenters offered additional criteria to be used in the evaluation of response resources. In dissent, some

⁷ Facility owners or operators may call the NCP Hotline at 202 260-2343 for information on the current NCP Product Schedule.

commenters requested a "standardization approach" using performance criteria instead of a classification process.

EPA is not implementing a new OSRO classification program at this time. Facility owners or operators can rely on the USCG OSRO classification process or other appropriate OSRO evaluation programs in place at the State level for defined geographic areas (e.g., State of Washington) to identify in the plan resources to respond to a worst case discharge, to the maximum extent practicable. However, where the provider of response resources is not a USCG-classified OSRO (or State-evaluated OSRO), RAs have the option to perform their own evaluation or verification to ensure that equipment is available and is in proper condition. In this evaluation, the RA may consider several factors including: the proximity of response resources to the facility; the adequacy of equipment and personnel resources; the OSRO's past performance and safety record; the number of additional facilities the OSRO has agreed to support; knowledge of state-of-the-art response techniques; knowledge of local fish and wildlife and sensitive environments and the ACP; the adequacy of the incident command structure; record-keeping practices for personnel safety equipment; and proficiency in spill management. This evaluation may involve visiting such organizations to determine whether equipment is available and in good working order. Facility owners or operators also should consider such factors when they evaluate the capabilities of an OSRO(s) to be listed in the response plan. RAs also may evaluate an OSRO's capabilities (including the facility owner's equipment and response resources when this is the case) during PREP area drills/exercises. EPA chose not to adopt a specific classification program of its own to avoid an additional step in the process to prepare and review facility response plans.

Fish and Wildlife and Sensitive Environments

EPA has identified proximity to fish and wildlife and sensitive environments as a factor in the substantial harm determination. EPA intended for owners or operators to use Appendix D of the proposed rule as interim guidance for the identification of environmentally sensitive areas until ACPs were available. Several commenters urged EPA to allow facility owners or operators to use the NCP or ACPs for the identification of environmentally sensitive areas. Other commenters

stated that the definition of "environmentally sensitive areas" was too broad, making it difficult to use in the determination of substantial harm. Some commenters objected to the listing of particular areas (e.g., wetlands, national monuments) as sensitive, while others requested that additional areas (e.g., water intakes for electric utilities and municipalities, National and State parks, and National forests) be included in the definition of sensitive environments.

As discussed previously, EPA does not include proposed Appendix D in this final rule. To serve the purpose of proposed Appendix D (i.e., to guide owners or operators in identifying fish and wildlife and sensitive environments), EPA adds a general definition of "fish and wildlife and sensitive environments" at § 112.2 of the final rule and references certain documents for further information. The definition, adapted from the text of proposed Appendix D, reads as follows: "areas that may be identified by either their legal designation or by evaluations of Area Committees (for planning) or members of the Federal On-Scene Coordinators spill response structure (during responses). These areas may include wetlands, National and State parks, critical habitats for endangered/threatened species, wilderness and natural resource areas, marine sanctuaries and estuarine reserves, conservation areas, preserves, wildlife areas, wildlife refuges, wild and scenic rivers, recreational areas, national forests, Federal and State lands that are research national areas, heritage program areas, land trust areas, and historical and archeological sites and parks. These areas may also include unique habitats such as: aquaculture sites and agricultural surface water intakes, bird nesting areas, critical biological resource areas, designated migratory routes, and designated seasonal habitats." To help facility owners or operators better address required fish and wildlife and sensitive environments concerns, EPA contributed to a governmental committee formed by various Federal agencies to develop a consistent definition of fish and wildlife and sensitive environments. The committee was made up of representatives from various Natural Resource Trustee agencies and from the agencies with OPA response plan authority. After considering comments on the EPA's proposed rule, the committee developed an interagency guidance document based on the information contained in Appendix D of the proposed rule. The

introductory text has been expanded to explain in more detail some environmental sensitivity issues, and address the substance of the public comments that EPA and the USCG received on this subject. To ensure more comprehensive response planning and to better protect fish and wildlife and sensitive environments, Attachment D-IV ("Vulnerability of Aquatic Ecosystems") and Attachment D-V ("Vulnerability Scale of Aquatic Habitats Impacted by Oil Spills") of proposed Appendix D have been replaced by Appendix IV ("Sensitive Biological and Human-Use Resources") and Appendix V ("Ranking of Shoreline Habitats Impacted by Oil Spills"), respectively in the DOC/NOAA guidance.

In addition, other environmental areas were added to those listed in Appendix D, Attachment D-I ("Responsible Federal Agencies for Specific Environmental Resources"), such as the National Forest System, Areas of Critical Environmental Concern, and cultural resources. This guidance also contains additional mailing addresses and phone numbers of government offices where facility owners or operators may obtain additional information. The document titled, "Guidance for Facility and Vessel Response Plans: Fish and Wildlife and Sensitive Environments," was published in the *Federal Register* by DOC/NOAA at 59 FR 14714, March 29, 1994. In today's rule, EPA has removed the Environmentally Sensitive Areas appendix that was proposed in the proposed rule and references to the appendix contained in proposed § 112.20. EPA refers facility owners and operators to Appendices I, II, and III of DOC/NOAA's guidance for guidance to identify fish and wildlife and sensitive environments until geographic-specific annexes to the ACPs are refined to the point where they address fish and wildlife and sensitive environments concerns in detail. As discussed previously, in the inland zone (as defined in 40 CFR 300.5), ACPs have been developed and will undergo continuous refinement. Facility owners or operators may contact the appropriate Regional office for fish and wildlife and sensitive environments information as it becomes available.

Worst Case Discharge

Under § 112.20(h)(5) of the proposed rule, owners or operators who must prepare a facility response plan under § 112.20 must calculate a worst case discharge quantity as described in proposed Appendix E. (Appendix E has been relabeled as Appendix D in today's final rule.) This worst case discharge

scenario, in turn, directly influences the quantity of spill response resources that must be available to the facility, as outlined in Appendix D. In the proposed rule, the determination of the worst case discharge volume is based on the facility's oil storage capacity, with additional factors taken into account for multiple-tank facilities with secondary containment or adjacent to navigable waters. EPA requested comments on allowing a reduction in the worst case discharge planning amount for facilities with adequate secondary containment in place.

One commenter stated that no reduction should be allowed for secondary containment, because oil spills frequently occur during transfer operations that take place outside of secondary containment. The commenter added that, even for those spills that occur within contained areas, a worst case discharge scenario should assume some failure of containment systems (as has happened historically in spills from facilities with secondary containment). Numerous commenters requested that EPA grant credit for secondary containment in the formula to calculate a facility's worst case discharge, thereby reducing the amount of response resources for which the facility would need to plan. Many of these commenters generally supported credit for secondary containment, because containment will reduce the quantity of a spill that escapes from the facility and impacts the environment. Other commenters argued that credit for secondary containment would provide an incentive to the regulated community to enhance facility spill prevention systems, while others contended that the probability of both the tank and its secondary containment failing simultaneously is extremely small.

In response to commenters' concerns, EPA has modified Appendix D to allow a 20 percent reduction in the worst case discharge amount at single-tank facilities for the presence of adequate secondary containment (i.e., containment equal to 100 percent of tank capacity plus sufficient freeboard for precipitation). The amount of this percentage reduction is based on an analysis of the percentage of released oil reaching navigable waters in the historical spill record from EPA's Emergency Response Notification System database.⁸ EPA believes that the data do not support granting a larger

credit, nor do they show that a smaller credit should be established. Historical data illustrate that secondary containment is not always completely effective, due to wave effects, breaches in containment walls, or operator error (such as an open secondary containment drainage valve).

With respect to multiple-tank facilities, EPA notes that it is finalizing the proposed credit for secondary containment at these facilities. As in the proposed rule, the calculation method in the final rule focuses on the oil storage capacity of the largest tank within a secondary containment area or a group of tanks permanently manifolded together within a common secondary containment area as a planning amount for the worst case discharge. This amount reflects a credit for secondary containment resulting in a lesser planning amount than the capacity of all tanks within secondary containment or the capacity of all tanks at the facility. Facilities that lack secondary containment would therefore be required to include the capacity of all storage tanks without secondary containment in their worst case discharge volume, while those facilities with credit for secondary containment would only need to consider the capacity of the largest tank or group of tanks within a single secondary containment area. As such, the presence of secondary containment leads to a significant credit that reduces the worst case discharge planning amount and the associated response resource requirements.

Numerous commenters requested that EPA grant credit for facility spill prevention measures and practices (other than secondary containment) in the calculation of the worst case discharge. Specific preventive measures mentioned by commenters include tertiary containment, conformance with American Petroleum Institute tank standards, automatic shutdown systems, high-level alarms, corrosion protection, and hydrostatic testing. Many commenters generally supported credit for specific preventive measures because of the capacity of such measures to reduce spill size or spill migration. Many commenters also argued that credit for other spill prevention measures would provide incentives to the regulated community to enhance spill prevention systems. Owners or operators would implement such measures to decrease the worst case discharge volume, and thus, decrease necessary expenditures for planning and response resources.

In today's final rule, EPA retains the credit for secondary containment at the

facility, but does not provide additional credits to facilities for the presence of such preventive measures in the calculation of the worst case discharge. Although EPA encourages facilities to implement additional preventive measures such as those cited by the commenters, the Agency believes that the effects of these measures on the size and impact of a potential spill are not readily quantifiable, nor as easily supported with historical spill evidence, as those of secondary containment. In addition, the Agency believes that granting credit for these prevention measures likely would require a more detailed verification and inspection process than would granting credit for secondary containment. Further, Congress' intent was that planning reflect the worst case discharge, and that the private sector be encouraged to increase its spill response capability.

In the calculation of a worst case discharge, EPA proposed to require multiple-tank facilities with secondary containment for which the nearest opportunity for discharge (i.e., storage tank, piping, or flowline) is adjacent to navigable water, to incorporate an additional 10 percent factor in the calculation of the worst case discharge quantity. (See Parts A3 and B3 of Appendix E of the proposed rule.) The Agency proposed the 10 percent distinction in the calculation of a worst case discharge volume between multiple-tank facilities adjacent to navigable waters and those not adjacent to navigable waters as a safety factor to address the potential for releases from multiple tanks.

Many commenters opposed the use of a 110 percent planning volume for facilities located adjacent to navigable water, because a facility could not discharge more than 100 percent of its capacity. Some commenters apparently did not realize that the provision only applied to multiple-tank facilities, and argued that the 110 percent planning volume factor should be eliminated because it is impossible for a single tank to discharge more than 100 percent of its capacity.

EPA has considered these comments and has decided to eliminate consideration of a facility's location adjacent to navigable waters from the calculation of the worst case discharge. Adding an additional 10 percent to the planning volume is unnecessary, because the emulsification table in Appendix E will account for removing material in excess of tank capacity for all petroleum facilities for which an owner or operator must plan under this rule. There is no need to impose an additional cost burden on multiple-tank

⁸The Technical Background Document to Support the Implementation of the OPA Response Plan Requirements, U.S. EPA, February 1993. Available for inspection in the Superfund Docket, room M2615, at the U.S. Environmental Protection Agency, 401 M Street, SW., Washington, DC 20460.

facility owners and operators for proximity to navigable waters. In Appendix D of today's final rule, the worksheets have been changed accordingly; this change will simplify the calculation and reduce confusion in the regulated community.

Several commenters requested that EPA clarify its definition of "permanently manifolded tanks" used in the calculation of a worst case discharge volume. Several commenters expressed confusion about whether permanently manifolded tanks connected by piping systems with valves that are normally shut, and permanently manifolded tanks that are separated by internal divisions in the secondary containment area, are considered separate tanks for purposes of the worst case discharge calculation.

The proposed definition of "permanently manifolded tanks" indicated that such systems were to be considered as separate tanks for the worst case discharge calculation. However, to better clarify EPA's intent, the definition of "permanently manifolded tanks" has been modified slightly in Appendix D of the final rule. The changes make it clear that within a common secondary containment area, interconnected tanks are considered to be single tanks if one or more of the manifolded tanks functions as an overflow container for another tank (i.e., is connected by piping at the top). In this case, individual manifolded tank volumes are not combined when calculating the worst case discharge planning volume. The owner or operator must provide evidence in the response plan that tanks with common piping or piping systems are not operated as one unit.

EPA recognizes that failures associated with multiple tanks that are hydraulically connected could result in the discharge of a greater volume of oil than the capacity of any one of the tanks. The definition of "permanently manifolded tanks" adequately accounts for this possibility. The owner or operator of a facility with permanently manifolded tanks would combine the capacities of all tanks manifolded together to calculate the worst case discharge planning volume for the facility.

Owners or operators of onshore production facilities must consider both storage capacity and production activities in the determination of a worst case discharge planning volume. In the proposed rule, EPA defined production volume for production wells (producing by pumping) as the pumping rate of the highest output well at the facility, multiplied by 1.5 times the number of

days the facility is unattended (Appendix E, Part B). Several commenters stated that EPA had not provided sufficient justification for requiring the calculation of the worst case discharge planning volume to include use of the 1.5 multiplier. Commenters believed that the pumping rate of the highest rate well could easily be determined and should not be artificially inflated, and suggested that the multiplier be used only when the rate of the highest rate well is unknown.

In response to commenters' concerns, EPA revised the worst case discharge calculation in Appendix D of the final rule to require facility owners or operators to use the 1.5 multiplier only if the rate of the well with the highest output or the number of days the facility is unattended cannot be estimated with certainty. EPA believes that the use of the 1.5 multiplier is appropriate in these instances because it provides a conservative basis upon which to incorporate these uncertain estimates of discharge potential in the calculation of a worst case discharge. If the facility owner or operator knows the rate of the well with the highest output and can predict the number of days that the facility will be unattended, then the production volume for each production well (producing by pumping) is equal to the pumping rate of the well, multiplied by the greatest number of days the facility will be unattended. If the actual pumping rate will exceed the planned pumping rate, or the facility will be unattended for longer than the time indicated in the facility response plan, then the owner or operator must amend the facility response plan to reflect this operational change at the facility. The owner or operator must resubmit the appropriate sections of the plan in accordance with § 112.20(d)(1).

In Appendix E of the proposed rule, the proposed worst case discharge planning volume for facilities with exploratory wells or production wells producing under pressure was the forecasted production volume for the highest output well at the facility plus the appropriate oil storage capacity component. The proposed rate for exploratory wells and production wells producing under pressure was the maximum 30-day forecasted well rate for wells 10,000 feet deep or less, or the maximum 45-day forecasted well rate for wells more than 10,000 feet deep. Several commenters from the oil industry stated that the forecasted well rates were unwarranted because cleanup procedures will begin before the entire volume of the discharge reaches the environment. Commenters suggested that EPA consider inspection frequency

or time intervals equal to the appropriate response tier as factors to determine the worst case discharge planning volume. In considering revisions to the proposed worst case discharge planning volume calculation, EPA also solicited input from MMS, which is in the process of promulgating response plan regulations for certain offshore production facilities.

EPA compared the response efforts required and damage resulting from discharges from production wells producing under pressure or exploratory wells to the response efforts required and damage resulting from discharges from storage tanks or production wells producing by pumping. Because discharges from storage tanks or production wells are discrete events, the volume of oil that is discharged is not influenced by response actions after they have been discovered. For production wells producing under pressure and exploratory wells, response efforts can mitigate the effects of the discharge during the time it takes response personnel to stop the flow of oil. For these reasons, EPA has revised the calculations for worst case discharge planning volume for facilities with exploratory wells or production wells producing under pressure.

The final version of the appendix (Appendix D in the final rule) requires the facility owner or operator to compare the forecasted rate of the highest output well to the capacity of response equipment and personnel to recover the volume of oil that could be discharged to calculate the production volume. If the well rate would overwhelm the response efforts, the worst case discharge planning volume would be calculated in a manner similar to that described in the proposed rule. (See Method A of Attachment D-1.) If the emergency response effort would match or exceed the forecasted rate of the highest output well, then the facility owner or operator would calculate the production volume based on the sum of: 1) the volume of oil discharge from the well between the time of the blowout and the expected time the response resources are on scene and recovering oil; and 2) the volume of oil discharged after the response resources begin operating until the spill is stopped (adjusted for the amount of oil recovered). (See Part B of Attachment D-2.) As in the case of production facilities with wells producing by pumping, Part B of Appendix D requires that the appropriate storage oil capacity also be added to the production volume to determine the worst case discharge planning volume. EPA describes these methods to calculate the production

volume for production facilities with wells producing under pressure or exploratory wells in Attachment D-1, "Methods to Calculate the Production Volumes for Production Facilities with Exploratory Wells or Production Wells Producing Under Pressure," to Appendix D.

Response Planning Levels

As part of the response planning requirements, EPA proposed in § 112.20(h)(5) that "substantial harm facilities" must evaluate smaller, more probable discharge quantities for their facility response plan in addition to the worst case discharge specified by the OPA. As proposed, the owner or operator of a facility would plan for small (2,100 gallons or less) and medium (between 2,100 gallons and 36,000 gallons, or ten percent of the capacity of the largest tank, whichever is less) discharge quantities, provided that these amounts are less than the worst case discharge amount.

EPA received comments both in support of, and opposed to, the concept of planning for various response levels. Some commenters indicated that the establishment of such additional planning requirements was beyond the OPA mandate. Other commenters argued that planning for smaller spills will be encompassed in planning for a worst case discharge, that planning for smaller spills is a function of good management practices and should not be regulated, or that pre-existing SPCC Plans adequately address smaller spills.

EPA has considered these comments and decided to retain the planning approach outlined in the proposed rule. Although planning for several discharge amounts is not mandated specifically under OPA, EPA has broad and ample regulatory authority under CWA section 311(j)(1)(C) for such a requirement. The Agency believes that discharges less severe than a worst case scenario may pose a serious threat to navigable waters, especially from the cumulative effects of several discharges, and that preparation to respond to smaller spills could lead to better overall protection of the nation's navigable waters. In addition, this three-level approach is consistent with the USCG's implementation of planning scenarios under OPA and some State response plan rulemakings.

Various sizes of discharges can require different types and amounts of equipment, products, and personnel, and must therefore be addressed separately. For example, a facility may want to hire a contractor to support response to a worst case discharge scenario, but handle smaller,

operational spills using its own personnel and equipment. To the extent that facility personnel are better able to address immediate actions associated with smaller spills, they will be better prepared to initiate a response to a worst case discharge until back-up resources arrive on-scene. Increased proficiency in handling the initial stages of a discharge can result in significant reductions in the extent of spill movement and associated impacts to the environment.

As many commenters recognized, planning for responses to more commonly occurring discharges may be more beneficial to facilities than planning for a worst case discharge that has a lower probability of occurrence—nevertheless, EPA continues to recognize that this planning approach may not be appropriate for all facilities, including those where the range of possible spill scenarios is small. Under today's final rule, as in the proposed rule, large facilities would still need to plan for three discharge amounts, but a small facility may only need to plan for two scenarios or a single scenario if its worst case discharge falls within one of the specified ranges.

To address the planning requirements, the owner or operator must consider the different types of facility-specific scenarios that may result in discharges at the facility. To the extent possible, the scenarios should account for the range of different operations that take place at the facility. Appendix F of the rule contains guidance on the development of such scenarios including a list of areas of operation to consider (e.g., oil storage tanks, piping, vehicle refueling areas, and tank car and tank truck loading and unloading areas), and a list of factors that may affect response efforts at the facility (e.g., direction of spill pathways, weather conditions, and available response equipment). As part of this process, owners or operators shall describe the threat posed by mobile facilities operating on site, especially during loading or unloading operations where the risk of a discharge is increased. Also, owners or operators of large facilities that handle, store, or transport oil at more than one geographically distinct location (e.g., oil storage areas at opposite ends of a single, continuous parcel of property) shall, as appropriate, develop separate sections of the response plans for each area where oil is stored, used, or distributed.

Several commenters expressed confusion between the tiered planning amounts described in proposed § 112.20(h)(5) and the response tiers in

proposed Appendix F for mobilizing resources in response to a worst case discharge. To avoid confusion in the final rule, EPA replaces the term "tiered planning scenarios" with "response planning levels" to describe small, medium, and worst case response planning amounts.

Drills/Exercises and Training

The proposed rule contained general requirements for response training and drills/exercises, but did not specify what the training and drills/exercises should entail. Specifically, proposed § 112.7(f)(1)(iii) required that all personnel involved in oil-handling activities participate in unannounced drills/exercises, at least annually. Proposed § 112.20(h)(8)(ii) required that the facility response plan contain a description and record of training courses and periodic unannounced drills/exercises to be carried out under the response plan.

Some commenters suggested that training should be required only for employees of "substantial harm facilities" and that only response personnel should be required to participate in drills/exercises. EPA notes that a general training program is required at 40 CFR 112.7(e)(10) for all facilities subject to the rule. However, the final rule limits the requirement for response training and drills/exercises to facilities that must prepare a response plan.

One commenter argued that the OPA does not mandate employee training. EPA notes that the OPA added CWA section 311(j)(5)(C) to specify that the response plan must describe training and periodic unannounced drills/exercises to be carried out under the plan. The Agency interprets this requirement to mean that Congress intended for facilities to conduct a program of training and drills/exercises for response to oil spills.

EPA has moved some subject matter on response training and drills/exercises from proposed § 112.7 to a new § 112.21 so that all requirements relevant to implementation of the OPA (i.e., requirements for response training) are addressed in this final rule. Requirements for oil spill prevention training that are not necessary for the OPA implementation will remain in proposed § 112.7(f) and will be addressed in a separate rulemaking.

To provide additional direction to the regulated community on what constitutes an acceptable training program, EPA expands the discussion of training in today's final rule. As set forth at § 112.21, response training must be functional in nature and

commensurate with the specific duties of each type of facility personnel with responsibilities under the plan. A facility's training program can be based on the USCG's Training Elements for Oil Spill Response, to the extent applicable to facility operations, or another response training program acceptable to the RA. The training elements are available from Petty Officer Daniel Caras at (202) 267-6570 or fax 267-4085/4065.

As set forth in the OPA, drills/exercises are evolutions that are designed to periodically test the ability of response personnel to ensure the safety of the facility and to mitigate or prevent discharges of oil. A drill/exercise program is comprised of facility drills/exercises, including tabletop and deployment exercises, both announced and unannounced, as well as participation in larger area drills/exercises and evaluation of these drills/exercises. The requirement to develop a drill/exercise program is included at § 112.21. This section references the National PREP. As described in Section I.C of this preamble, PREP is a joint industry/government effort to establish recognized national guidelines for conducting drills/exercises to meet the OPA requirements. Following the PREP guidelines (see Appendix E to this part, section 10, for availability) would satisfy a facility's requirements for drills/exercises under this final rule. Alternately, under § 112.21(c), a facility owner or operator may develop a program that is not based on the PREP guidelines. Such a program is subject to approval by the RA based on the description of the program provided in the response plan.

Descriptions of training and drills/exercises for facility personnel engaged in oil spill response must be provided in the plan as stated in § 112.20(h)(8). To satisfy this requirement, facilities must describe conformance with the PREP guidelines as part of their response plan or provide a detailed description of an alternative drill/exercise program. Lessons learned from the facility owner's or operator's evaluation of response drills/exercises may help identify other relevant subject areas for training. As part of the PREP development process, the USCG, with assistance from other Federal agencies, OSROs, and the regulated community, is preparing a reference document to assist facility owners and operators in the evaluation of their drills/exercises.

As described in Section II.B of this preamble, some commenters objected to including logs for training and drills/exercises in the response plan. EPA will not require training records and records of drills/exercises to be included in the

response plan, because that is impracticable without constantly revising the plan. Section 112.20(h)(8)(iv) of the final rule makes it clear that the logs may be included in the response plan or maintained as an annex to the response plan.

C. Section-by-Section Analysis

This section lists sequentially the major changes from the proposed rule that have been incorporated into today's final rule. The revisions listed below result from consideration of public comments on the proposed rule (as previously discussed, the Response to Comments Document for the Facility Response Plan Rulemaking maintained at the docket contains detailed summaries of, and responses to, all comments received on the proposed rule) and from efforts to coordinate EPA and other Federal agencies' requirements for implementing response plan regulations under the OPA. A detailed discussion of the reasoning behind most of these changes can be found in Section I.C or II.B of this preamble. In addition to the major changes detailed below, EPA has also made a series of minor editorial changes to correct typographical and grammatical errors, to conform more closely with language from different sections of today's rule and language from the USCG's interim final rule for MTR facilities, and to improve the clarity of the requirements.

As discussed in Section I of this preamble, EPA will defer finalizing changes to certain sections of the regulation as proposed in the proposed rule. EPA plans to address these changes in a subsequent rulemaking. Changes to the following paragraphs from the proposed rule are not included in today's final rule: paragraphs (d)(4) and (g) of § 112.1 (General Applicability and Notification); paragraph (d) of § 112.4 (Amendment of Spill Prevention, Control, and Countermeasure Plan by Regional Administrator); and paragraphs (a)(2), (d), (f), (i), and (j) of § 112.7 (Spill Prevention, Control, and Countermeasure Plan general requirements). Also, Appendix H (Brittle Fracture Considerations in API Standard 653) as proposed at 58 FR 8324 is not included in today's final rule.

Section 112.2 Definitions

In § 112.2, the definitions of "adverse weather," "contract or other approved means," "maximum extent practicable," and "worst case discharge" are revised; the definitions of "alteration" and "repair" from the proposed rule are not

included; and definitions of "fish and wildlife and sensitive environments" and "oil spill removal organization" are added.

Section 112.20 Facility Response Plans

Throughout § 112.20, the term "emergency response coordinator" is replaced with the term "qualified individual," and the term "environmentally sensitive areas" is replaced with the term "fish and wildlife and sensitive environments."

Paragraph (a) is reorganized and revised to specify EPA's approach to implement the facility response plan requirements of OPA and of this final rule.

Paragraphs (a)(2)(ii) and (iii) (paragraphs (a)(2)(ii) and (iii) from the proposed rule) are expanded to specify that for new facilities and facilities undergoing a planned change in operations, adjustments to the response plan to reflect changes that occur at the facility during the start-up phase of operations must be submitted to the RA after an operational trial period of 60 days.

Paragraph (b)(1) is revised to clarify that if the RA makes a determination of substantial harm then he or she shall notify the facility owner or operator in writing and shall provide a basis for the determination.

Paragraph (c)(4) is revised to specify, for plans to be reviewed by the RA, that the RA will review plans periodically on a schedule established by the RA provided that the period between plan reviews does not exceed five years.

Paragraph (d)(1) is revised to extend its applicability to all facilities for which a response plan is required and to clarify that only revised portions of a response plan need to be resubmitted for approval and inclusion in the existing plan. The requirement for the RA to review for approval changes to plans for "significant and substantial harm facilities" that was proposed at § 112.20(d)(1) has been moved to new § 112.20(d)(4).

Paragraphs (d)(1)(iii) and (d)(2) are revised to clarify that a change in the identity of an OSRO(s) that does not result in a material change in support capabilities is not a material change requiring approval but that a copy of such a change must be provided to the RA.

Paragraph (d)(2) is revised to state that certain amendments do not require "approval" by the RA, rather than "prior approval."

Paragraph (d)(3) is added to indicate that the EPA-issued facility identification number (where one has been assigned) must accompany any

changes to the plan that are submitted to the RA. This number is issued when the plan was received and is included on all EPA correspondences to the facility. Including this number on all subsequent submissions by the facility to EPA will ensure proper tracking and handling of information.

Paragraph (f)(1)(i) is revised to clarify that total oil storage capacity and not total storage capacity is the criteria to be evaluated.

Paragraph (f)(1)(ii)(A) is revised to clarify that adequate secondary containment must account for precipitation as required by § 112.7(e)(2)(ii).

Paragraph (f)(1)(ii)(D) is revised to clarify it addresses reportable oil spills.

Paragraphs (f)(1)(ii)(B) and (f)(2)(i)(D) are revised to remove reference to Appendix D, to add a reference to the "Guidance for Facility and Vessel Response Plans: Fish and Wildlife and Sensitive Environments" (see Appendix E to this part, section 10, for availability) and the appropriate ACP, and to clarify that use of an alternative formula does not require prior approval by the RA but that the formula must be comparable to the appropriate formula in Appendix C to this part. Conforming edits are made to paragraphs (a)(3) and (e).

Paragraph (f)(2)(ii) is revised to clarify that "any person" includes representatives from other government agencies in addition to the public, to more accurately describe the contents of paragraph (f)(2)(i) as factors not criteria, and to clarify that the RA shall consider petitions and respond in an appropriate amount of time.

Paragraph (f)(3)(i) is removed to reflect the deletion of Appendix D and because the RA already has authority under paragraph (f)(2) to consider proximity to other areas determined to possess ecological value. The remainder of paragraph (f)(3) is renumbered accordingly.

Paragraph (g) is reorganized by removing the requirement for periodic review and update of the plan from paragraph (g)(1) and moving it to new paragraph (g)(3).

Paragraph (h) is revised to clarify the mandatory nature of Appendix F.

Paragraphs (h)(1)(vi) and (h)(3)(vii) are revised to clarify that facility owners or operators need only reference but not include community evacuation plans in the response plan.

Paragraph (h)(1)(vii) is revised to clarify that securing the source of the discharge is among the immediate measures that must be described in the plan.

Paragraph (h)(2) is revised to clarify that a brief description of the type of facility (i.e., SIC Code) must be provided as part of the basic facility information.

Paragraph (h)(3)(x) is removed and paragraph (h)(3)(i) is revised to clarify the mandatory nature of Appendix E and allow under certain circumstances owners or operators to make comparable arrangements for response resources.

Paragraph (h)(5) is revised to replace the reference to tiered response planning with a reference to response planning levels. Conforming edits are made to Appendix F.

Paragraph (h)(5)(ii) is revised to clarify that for complexes, the small planning quantity shall be the larger of the amounts calculated for each component of the facility.

Paragraph (h)(8) is revised to clarify the requirements to describe programs for drills/exercises and response training, and indicate that logs may be kept as an annex to the response plan.

Paragraph (h)(11) is added to cross-reference the requirement at § 112.20(a)(2) to complete a response plan cover sheet provided in Section 2.0 of Appendix F.

New § 112.20(i) is added to allow owners or operators to request reconsideration of or appeal certain decisions by the RA.

Section 112.21 Facility Response Training and Drills

New § 112.21 is added to describe requirements for facility response training and drills/exercises. The requirements for annual drills/exercises in proposed § 112.7(f)(1)(iii) are replaced by a requirement to follow the PREP guidelines or an alternative program acceptable to the RA. Provisions related to spill prevention training in § 112.7(f) will be finalized in a future rulemaking.

Appendix B—Memorandum of Understanding Among DOI, DOT, and EPA

The Memorandum of Understanding Among the Secretary of the Interior, Secretary of Transportation, and Administrator of the Environmental Protection Agency signed on February 3, 1994 is added at Appendix B to 40 CFR part 112.

Appendix C—Substantial Harm Criteria

The title of the Appendix was changed from "Determination of Substantial Harm" to "Substantial Harm Criteria."

Throughout Appendix C, the term "environmentally sensitive areas" is replaced with the term "fish and wildlife and sensitive environments,"

the term "drinking water intake" is replaced with the term "public drinking water intake," the language is clarified to indicate which provisions are required, and "alternative" is changed to "comparable."

For response time estimation purposes, in section 1.1, the definitions of "Great Lakes," "Higher Volume Port Area," and "Inland Area" are revised.

The list of the substantial harm criteria in section 2.0 is removed to eliminate redundancy with § 112.20(f)(1) and the flowchart in Attachment C-I to Appendix C. Section 2.1 is renamed section 2.0.

In new section 2.0, the language is clarified to indicate that the term "public drinking water intake" is analogous to the term "public water system" at 40 CFR 143.2(c) as described at 40 CFR part 110. Footnotes clarifying that public drinking water intakes are analogous to public water systems as described at 40 CFR 143.2(c) are added to this section and Attachment C-II. The definition of "injury" is removed from this section to eliminate redundancy with the definition in § 112.2.

In section 3.0, the last sentence is revised to clarify that for facilities that do not meet the substantial harm criteria using a comparable formula to calculate the planning distance, documentation of the comparable formula must not only be maintained at the facility but must be made available to EPA if requested. The first sentence in the oil transport on moving navigable waters in Attachment C-III is revised to include "or a comparable formula as described in § 112.20(a)(3)" and "for oil transport on moving navigable water." The section describing oil transport on moving navigable waters in Attachment C-III is clarified to indicate that adverse weather conditions shall be considered.

In Attachment C-III, a section describing a method to determine a planning distance for tidal-influenced navigable water is added and the appropriate cross-reference is provided. A paragraph is added to indicate that if a facility owner or operator determines that more than one type of navigable water applies, the planning distance calculation must be performed for each navigable water type, and the greatest distance must be used in the substantial harm evaluation. The third paragraph is revised to provide an example of an instance where it would not be necessary to calculate a planning distance for screening purposes. The fourth paragraph of Attachment C-III is revised to include a reference to the example for determining the planning distance for the two types of navigable waters. The format of Table 3 is revised

and further explanation of how the time intervals in Table 3 should be used to calculate a baseline planning distance is added. A conversion constant is added to the formula for calculating the surface area covered by an oil spill on still water. Conforming changes are made to the description of the formula and the sample calculation. Clarifying language is added to the description of the section on oil transport over land. Also, language is added to clarify the term "close proximity" for purposes of calculating the planning distance. Section 4.0 "References" is added to Appendix C.

*Environmentally Sensitive Areas
(Appendix D in the Proposed Rule)*

The Environmentally Sensitive Areas appendix from the proposed rule is removed. Instead, EPA refers owners or operators to Appendices I, II, and III of the "Guidance for Facility and Vessel Response Plans: Fish and Wildlife and Sensitive Environments," (see Appendix E to this part, section 10, for availability) and to the appropriate ACP for guidance in identifying fish and wildlife and sensitive environments.

Appendix D—Determination of a Worst Case Discharge (Appendix E in the Proposed Rule)

Throughout Appendix D, the language is clarified to indicate which provisions are required and which are provided only as guidance. The last sentence of the first paragraph of the instructions is revised to remove "and its proximity to navigable waters."

Parts A1 and B1 of the instructions for the determination of the worst case discharge at single-tank facilities are revised to reflect credit for adequate secondary containment.

Parts A3 and B3 of the instructions are removed and Parts A2 and B2 and explanatory notes revised to reflect elimination of the additional 10 percent factor for proximity to navigable waters and clarification of the terms "permanently manifolded tanks" and "adequate secondary containment."

Part B of the instructions for the determination of the worst case discharge for production facilities is revised to reflect changes in the calculations for production wells producing by pumping. Part B is also revised to reflect changes in the calculations for exploratory wells and production wells producing under pressure. Attachment D-I is added to describe these changes.

Appendix E—Determination and Evaluation of Required Response Resources for Facility Response Plans (Appendix F in the Proposed Rule)

The title of the Appendix was changed from "Guidelines for Determining and Evaluating Required Response Resources for Facility Response Plans" to "Determination and Evaluation of Required Response Resources for Facility Response Plans."

Throughout Appendix E, the term "environmentally sensitive areas" is replaced with the term "fish and wildlife and sensitive environments" as defined at § 112.2 and references to former Appendix D replaced with references to the Guidance for Facility and Vessel Response Plans: Fish and Wildlife and Sensitive Environments published by DOC/NOAA in the Federal Register on March 29, 1994 and to the appropriate ACP. The language is clarified to indicate which provisions are required. Section 1.1 is revised to specify that this appendix shall be used by facility owners and operators to determine resources for the response plan and by the RA in the review of facility response plans.

Section 1.2 is added to Appendix E, and the definitions of non-persistent and persistent oils and non-petroleum oils from Attachment F-2 of the proposed rule are moved into section 1.2 of Appendix E. Group 5 oils are added to the definition of persistent oils to account for oils that have specific gravities that are equal to or greater than 1.0. The definitions of "nearshore," "ocean," "operating area," and "operating environment" are added to section 1.2 of Appendix E. Section 1.2.8 is added to reference other definitions.

Sections 3.2 and 4.2 are revised to replace "synonymous with" with "that corresponds to."

Section 5.6 is revised to indicate that at least 20 percent of the on-water response equipment must be capable of operating in shallow water.

A reference to section 7.6 which describes the procedures for non-petroleum oils is added to section 7.1.

Section 7.4 is revised to remove the 110 percent factor from the example worst case discharge calculation. The resulting tier values are revised accordingly.

References to the definitions and response resource considerations for Group 5 and non-petroleum oils were added to Tables 2 and 3.

As described in Section II.B of this preamble, a series of changes to the remaining sections of Appendix E (e.g., the addition of separate procedures for non-petroleum oils) are made to ensure

greater consistency with the equipment instructions contained in the USCG's interim final rule for MTR facilities.

Appendix F—Model Facility-Specific Response Plan (Appendix G in the Proposed Rule)

The title of Appendix G, "Standard Facility-Specific Response Plan," is changed to "Model Facility-Specific Response Plan" in the final rule.

Throughout Appendix F, the term "emergency response coordinator" is replaced with the term "qualified individual," the term "environmentally sensitive areas" is replaced with the term "fish and wildlife and sensitive environments," the language is clarified to indicate which provisions are required, and the language is clarified to indicate "oil storage capacity," "oil storage tanks," and "aboveground oil storage tanks" where appropriate.

Section 1.0 is revised to specify that owners or operators of large facilities that handle, store, or transport oil at more than one geographically distinct location shall, as appropriate, develop separate sections of the response plan for each storage area. The reference for immediate actions is changed from "(Section 1.7) condensed" to "(Section 1.7.1) complete."

Section 1.2 is revised to indicate that the home and work address of the qualified individual(s) shall be listed in the response plan. The list of States with EPA-approved wellhead protection programs is replaced with an information number for the SDWA Hotline and a definition of "wellhead protection area" is added.

Paragraph 4 (now paragraph 5) of the introduction to section 1.3, Emergency Response Information, is revised to clarify which types of emergency response personnel should be included on the personnel lists. Section 1.3.1 is revised to include the phone number of the Regional Response Center, to specify that the Federal OSC should be contacted, and to remove the item requiring notification of the Area Committee from the list. Section 1.3.2 is split into sections 1.3.2 and 1.3.3 and the remainder of section 1.3 is renumbered accordingly. Also, section 1.3.2 is revised to improve clarity and to indicate that the facility owner or operator must follow appropriate procedures contained in the NCP and ACP to obtain approval for the use of dispersants. New section 1.3.3 is revised to include a log for basic information on equipment testing (from section 1.3.2 of the proposed rule) and deployment drills (from the results of required drills/exercises). Section 1.3.3 (now 1.3.4) is revised by reordering the lists

and adding "pager number" to the facility response team list. Section 1.3.4 (now 1.3.5) is revised to clarify that facilities must, as appropriate, reference existing community evacuation plans.

The language in section 1.4 is revised to clarify the mandatory nature of the hazard evaluation provisions. A definition of surface impoundment is added to section 1.4.1. In section 1.4.2, examples of areas of economic importance are added. Section 1.4.3 is revised to remove the word "quantitative."

Section 1.5.2 is revised to remove details on the calculation of worst case discharge planning volume to avoid redundancy with Appendix D.

A form detailing recommended immediate actions is added to section 1.7.1.

Section 1.8 is revised to clarify the requirements to describe the facility's drill/exercise and training programs and to reflect that logs may be included in the response plan or kept as an annex to the plan. Conforming changes are made to the sample logs throughout the appendix.

Section 1.9 is revised to add provision L, that requires the owner or operator of a complex to identify the interface between portions of the facility that are regulated by different agencies. EPA believes that this will help reinforce

owners or operators understanding of jurisdictional issues at certain facilities.

The response plan cover sheet is revised to a fill-in-the-blank form. A footnote is added to explain where to locate Dun & Bradstreet and SIC code information. Conforming changes are made to Section 2.0.

The acronyms DOC, MMS, PREP, RRC, and RSPA are added to section 3.0.

III. Regulatory Analyses

A. Executive Order 12866

Under E.O. 12866, (58 FR 51735, October 4, 1993) the Agency must determine whether the regulatory action is "significant" and therefore subject to OMB review and the requirements of the E.O. The Order defines "significant regulatory action" as one that is likely to result in a rule that may:

(1) Have an annual effect on the economy of \$100 million or more or adversely affect in a material way the economy, a sector of the economy, productivity, competition, jobs, the environment, public health or safety, or State, local, or tribal governments or communities;

(2) Create a serious inconsistency or otherwise interfere with an action taken or planned by another agency;

(3) Materially alter the budgetary impact of entitlements, grants, user fees,

or loan programs or the rights and obligations of recipients thereof; or

(4) Raise novel legal or policy issues arising out of legal mandates, the President's priorities, or the principles set forth in E.O. 12866.

Pursuant to the terms of E.O. 12866, it has been determined that this rule is a "significant regulatory action" because it will have an annual effect on the economy of more than \$100 million. An economic analysis performed by the Agency, available for inspection in Room M2615 at the U.S. Environmental Protection Agency, 401 M Street, SW., Washington, DC 20460, shows that this rule would result in estimated costs to affected facilities of greater than \$100 million in the first year. As such, this action was submitted to OMB for review as required by E.O. 12866. Changes made in response to OMB suggestions or recommendations will be documented in the public record.

The analysis shows that the action will result in costs to the regulated community of approximately \$107.2 million during the first year that the rule is in effect and approximately \$41.6 million in each subsequent year. The first-year, subsequent-year, and annualized costs of the revisions to affected facilities are presented in Table 1.

TABLE 1.—TOTAL COST TO AFFECTED FACILITIES OF THE FINAL RULE
[in millions of dollars]

Requirement	First-year costs	Subsequent-year costs	Annualized value of total costs
Rule Familiarization	12.2	0	1.7
Facility Response Plan	95.0	41.6	48.7
Total	107.2	41.6	50.4

EPA is also expected to incur costs estimated at \$1.3 million in the first year and \$1.2 million in the second year to implement the program.

The Regulatory Impact Analysis (RIA) prepared in support of this rule also includes an assessment of the environmental benefits associated with the proposed revisions. This quantified benefit estimate includes only the benefits of avoided clean-up costs, value of lost product, avoided natural resource damages, and avoided property damages as a result of the mitigation of the severity of spills that occur. Other damages caused by oil spills that are not included in the quantitative estimate, include lost profit by business, public health risks, and foregone existence/option value. Assuming that response plans effectively reduce oil spill damage

by 30 percent, benefits that have been quantified in the RIA are estimated to range from \$20.3 million to \$40.6 million depending on assumptions regarding the volume of discharged oil that escapes secondary containment systems.

B. Regulatory Flexibility Act

The Regulatory Flexibility Act of 1980 (5 U.S.C. 601-611) requires that a Regulatory Flexibility Analysis be performed for all rules that are likely to have a "significant impact on a substantial number of small entities." The results of a preliminary analysis indicate that this rule will not have significant adverse impacts on small businesses because small businesses are unlikely to meet the criteria to prepare and submit a response plan and are

therefore unlikely to be affected by the facility response planning requirements, which account for virtually all of the total costs of the final rulemaking (see the "Regulatory Impact Analysis of Revisions to the Oil Pollution Prevention Regulation to Implement the Facility Response Planning Requirements of the Oil Pollution Act of 1990," Appendix F, March 1994, available for inspection in Room M2615 at the U.S. Environmental Protection Agency, 401 M Street, SW., Washington, DC 20460). Therefore, EPA certifies that this proposed rule is not expected to have a significant impact on small entities, and therefore that no Regulatory Flexibility Analysis is necessary.

C. Paperwork Reduction Act

The information collection requirements in this rule have been approved by the Office of Management and Budget (OMB) under the Paperwork Reduction Act, 44 U.S.C. 3501 *et seq.* and have been assigned control number 2050-0135.

Preparation of a response plan has an estimated first-year reporting burden ranging from 131.75 hours to 350 hours per respondent, averaging 194.5 hours, and an estimated first-year recordkeeping burden ranging from 13.5 hours to 34 hours per respondent, averaging 21.5 hours. These estimates include time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Maintaining, reviewing, and updating a response plan have an estimated annual reporting burden in subsequent years ranging from 52 hours to 161 hours per respondent, averaging 83 hours, and an estimated annual recordkeeping burden in subsequent years ranging from two to ten hours per respondent, averaging 4.75 hours. Facilities regulated under the Oil Pollution Prevention rule that are not required to prepare response plans have an estimated reporting burden ranging from 0.25 to 6.5 hours per respondent, averaging less than one hour.

Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to Chief, Information Policy Branch; EPA; 401 M St., SW. (Mail Code 2136); Washington, DC 20460; and to the Office of Information and Regulatory Affairs, Office of Management and Budget, Washington, DC 20503, marked "Attention: Desk Officer for EPA."

D. Display of OMB Control Numbers

EPA is also amending the table of currently approved information collection request (ICR) control numbers issued by OMB for various regulations. This amendment updates the table to accurately display those information requirements contained in this final rule. This display of the OMB control number and its subsequent codification in the Code of Federal Regulations satisfies the requirements of the Paperwork Reduction Act (44 U.S.C. 3501 *et seq.*) and OMB's implementing regulations at 5 CFR part 1320.

The ICR was previously subject to public notice and comment prior to OMB approval. As a result, EPA finds that there is "good cause" under section 553(b)(3)(B) of the Administrative

Procedure Act (5 U.S.C. 553(b)(3)(B)) to amend this table without prior notice and comment. Due to the technical nature of the table, further notice and comment would be unnecessary.

List of Subjects**40 CFR Part 9**

Environmental protection, Reporting and recordkeeping requirements.

40 CFR Part 112

Environmental protection, Fire prevention, Flammable materials, Materials handling and storage, Oil pollution, Oil spill response, Penalties, Petroleum, Reporting and recordkeeping requirements, Tanks, Water pollution control, Water resources.

Dated: June 15, 1994.

Carol M. Browner,
Administrator.

For the reasons set out in the preamble, 40 CFR Parts 9 and 112 are amended as follows:

**PART 9—OMB APPROVAL NUMBERS
UNDER THE PAPERWORK
REDUCTION ACT**

1. The authority citation for part 9 continues to read as follows:

Authority: 7 U.S.C. 135 *et seq.*, 136-136y; 15 U.S.C. 2001, 2003, 2005, 2006, 2601-2671; 21 U.S.C. 331j, 346a, 348; 31 U.S.C. 9701; 33 U.S.C. 1251 *et seq.*, 1311, 1313d, 1314, 1321, 1326, 1330, 1344, 1345 (d) and (e), 1361; E.O. 11735, 38 FR 21243, 3 CFR, 1971-1975 Comp. p. 973; 42 U.S.C. 241, 242b, 243, 246, 300f, 300g, 300g-1, 300g-2, 300g-3, 300g-4, 300g-5, 300g-6, 300j-1, 300j-2, 300j-3, 300j-4, 300j-9, 1857 *et seq.*, 6901-6992k, 7401-7671q, 7542, 9601-9657, 11023, 11048.

2. Section 9.1 is amended by adding a centerheading and entry to the table in numerical order to read as follows:

§ 9.1 OMB approvals under the Paperwork Reduction Act.

40 CFR citation	OMB control No.
Oil Pollution Prevention; Non-Transportation-Related On-shore Facilities 112.20	2050-0135

**PART 112—OIL POLLUTION
PREVENTION**

3. The authority citation for part 112 is revised to read as follows:

Authority: 33 U.S.C. 1321 and 1361; E.O. 12777 (October 18, 1991), 3 CFR, 1991 Comp., p. 351.

4. Section 112.2 is amended by removing the paragraph designations (a) through (l), placing definitions in alphabetical order, and adding the following new definitions in alphabetical order, to read as follows:

§ 112.2 Definitions.

*** * * * ***
Adverse weather means the weather conditions that make it difficult for response equipment and personnel to cleanup or remove spilled oil, and that will be considered when identifying response systems and equipment in a response plan for the applicable operating environment. Factors to consider include significant wave height as specified in Appendix E to this part, as appropriate, ice conditions, temperatures, weather-related visibility, and currents within the area in which the systems or equipment are intended to function.

Complex means a facility possessing a combination of transportation-related and non-transportation-related components that is subject to the jurisdiction of more than one Federal agency under section 311(j) of the Clean Water Act.

Contract or other approved means: (1) A written contractual agreement with an oil spill removal organization(s) that identifies and ensures the availability of the necessary personnel and equipment within appropriate response times; and/or

(2) A written certification by the owner or operator that the necessary personnel and equipment resources, owned or operated by the facility owner or operator, are available to respond to a discharge within appropriate response times; and/or

(3) Active membership in a local or regional oil spill removal organization(s) that has identified and ensures adequate access through such membership to necessary personnel and equipment to respond to a discharge within appropriate response times in the specified geographic areas; and/or

(4) Other specific arrangements approved by the Regional Administrator upon request of the owner or operator.

*** * * * ***
Fish and wildlife and sensitive environments means areas that may be identified by either their legal designation or by evaluations of Area Committees (for planning) or members of the Federal On-Scene Coordinator's spill response structure (during responses). These areas may include wetlands, National and State parks, critical habitats for endangered/threatened species, wilderness and natural resource areas, marine

sanctuaries and estuarine reserves, conservation areas, preserves, wildlife areas, wildlife refuges, wild and scenic rivers, recreational areas, national forests, Federal and State lands that are research national areas, heritage program areas, land trust areas, and historical and archeological sites and parks. These areas may also include unique habitats such as: aquaculture sites and agricultural surface water intakes, bird nesting areas, critical biological resource areas, designated migratory routes, and designated seasonal habitats.

Injury means a measurable adverse change, either long- or short-term, in the chemical or physical quality or the viability of a natural resource resulting either directly or indirectly from exposure to a discharge of oil, or exposure to a product of reactions resulting from a discharge of oil.

Maximum extent practicable means the limitations used to determine oil spill planning resources and response times for on-water recovery, shoreline protection, and cleanup for worst case discharges from onshore non-transportation-related facilities in adverse weather. It considers the planned capability to respond to a worst case discharge in adverse weather, as contained in a response plan that meets the requirements in § 112.20 or in a specific plan approved by the Regional Administrator.

Oil Spill Removal Organization means an entity that provides oil spill response resources, and includes any for-profit or not-for-profit contractor, cooperative, or in-house response resources that have been established in a geographic area to provide required response resources.

Worst case discharge for an onshore non-transportation-related facility means the largest foreseeable discharge in adverse weather conditions as determined using the worksheets in Appendix D to this part.

5. Sections 112.20 and 112.21 are added to read as follows:

§ 112.20 Facility response plans.

(a) The owner or operator of any non-transportation-related onshore facility that, because of its location, could reasonably be expected to cause substantial harm to the environment by discharging oil into or on the navigable waters or adjoining shorelines shall prepare and submit a facility response plan to the Regional Administrator, according to the following provisions:

(1) For the owner or operator of a facility in operation on or before

February 18, 1993 who is required to prepare and submit a response plan under 33 U.S.C. 1321(j)(5), the Oil Pollution Act of 1990 (Pub. L. 101-380, 33 U.S.C. 2701 *et seq.*) requires the submission of a response plan that satisfies the requirements of 33 U.S.C. 1321(j)(5) no later than February 18, 1993.

(i) The owner or operator of an existing facility that was in operation on or before February 18, 1993 who submitted a response plan by February 18, 1993 shall revise the response plan to satisfy the requirements of this section and resubmit the response plan or updated portions of the response plan to the Regional Administrator by February 18, 1995.

(ii) The owner or operator of an existing facility in operation on or before February 18, 1993 who failed to submit a response plan by February 18, 1993 shall prepare and submit a response plan that satisfies the requirements of this section to the Regional Administrator before August 30, 1994.

(2) The owner or operator of a facility in operation on or after August 30, 1994 that satisfies the criteria in paragraph (f)(1) of this section or that is notified by the Regional Administrator pursuant to paragraph (b) of this section shall prepare and submit a facility response plan that satisfies the requirements of this section to the Regional Administrator.

(i) For a facility that commenced operations after February 18, 1993 but prior to August 30, 1994, and is required to prepare and submit a response plan based on the criteria in paragraph (f)(1) of this section, the owner or operator shall submit the response plan or updated portions of the response plan, along with a completed version of the response plan cover sheet contained in Appendix F to this part, to the Regional Administrator prior to August 30, 1994.

(ii) For a newly constructed facility that commences operation after August 30, 1994, and is required to prepare and submit a response plan based on the criteria in paragraph (f)(1) of this section, the owner or operator shall submit the response plan, along with a completed version of the response plan cover sheet contained in Appendix F to this part, to the Regional Administrator prior to the start of operations (adjustments to the response plan to reflect changes that occur at the facility during the start-up phase of operations must be submitted to the Regional Administrator after an operational trial period of 60 days).

(iii) For a facility required to prepare and submit a response plan after August

30, 1994, as a result of a planned change in design, construction, operation, or maintenance that renders the facility subject to the criteria in paragraph (f)(1) of this section, the owner or operator shall submit the response plan, along with a completed version of the response plan cover sheet contained in Appendix F to this part, to the Regional Administrator before the portion of the facility undergoing change commences operations (adjustments to the response plan to reflect changes that occur at the facility during the start-up phase of operations must be submitted to the Regional Administrator after an operational trial period of 60 days).

(iv) For a facility required to prepare and submit a response plan after August 30, 1994, as a result of an unplanned event or change in facility characteristics that renders the facility subject to the criteria in paragraph (f)(1) of this section, the owner or operator shall submit the response plan, along with a completed version of the response plan cover sheet contained in Appendix F to this part, to the Regional Administrator within six months of the unplanned event or change.

(3) In the event the owner or operator of a facility that is required to prepare and submit a response plan uses an alternative formula that is comparable to one contained in Appendix C to this part to evaluate the criterion in paragraph (f)(1)(ii)(B) or (f)(1)(ii)(C) of this section, the owner or operator shall attach documentation to the response plan cover sheet contained in Appendix F to this part that demonstrates the reliability and analytical soundness of the alternative formula.

(b)(1) The Regional Administrator may at any time require the owner or operator of any non-transportation-related onshore facility to prepare and submit a facility response plan under this section after considering the factors in paragraph (f)(2) of this section. If such a determination is made, the Regional Administrator shall notify the facility owner or operator in writing and shall provide a basis for the determination. If the Regional Administrator notifies the owner or operator in writing of the requirement to prepare and submit a response plan under this section, the owner or operator of the facility shall submit the response plan to the Regional Administrator within six months of receipt of such written notification.

(2) The Regional Administrator shall review plans submitted by such facilities to determine whether the facility could, because of its location, reasonably be expected to cause significant and substantial harm to the

environment by discharging oil into or on the navigable waters or adjoining shorelines.

(c) The Regional Administrator shall determine whether a facility could, because of its location, reasonably be expected to cause significant and substantial harm to the environment by discharging oil into or on the navigable waters or adjoining shorelines, based on the factors in paragraph (f)(3) of this section. If such a determination is made, the Regional Administrator shall notify the owner or operator of the facility in writing and:

(1) Promptly review the facility response plan;

(2) Require amendments to any response plan that does not meet the requirements of this section;

(3) Approve any response plan that meets the requirements of this section; and

(4) Review each response plan periodically thereafter on a schedule established by the Regional Administrator provided that the period between plan reviews does not exceed five years.

(d)(1) The owner or operator of a facility for which a response plan is required under this part shall revise and resubmit revised portions of the response plan within 60 days of each facility change that materially may affect the response to a worst case discharge, including:

(i) A change in the facility's configuration that materially alters the information included in the response plan;

(ii) A change in the type of oil handled, stored, or transferred that materially alters the required response resources;

(iii) A material change in capabilities of the oil spill removal organization(s) that provide equipment and personnel to respond to discharges of oil described in paragraph (h)(5) of this section;

(iv) A material change in the facility's spill prevention and response equipment or emergency response procedures; and

(v) Any other changes that materially affect the implementation of the response plan.

(2) Except as provided in paragraph (d)(1) of this section, amendments to personnel and telephone number lists included in the response plan and a change in the oil spill removal organization(s) that does not result in a material change in support capabilities do not require approval by the Regional Administrator. Facility owners or operators shall provide a copy of such changes to the Regional Administrator as the revisions occur.

(3) The owner or operator of a facility that submits changes to a response plan as provided in paragraph (d)(1) or (d)(2) of this section shall provide the EPA-issued facility identification number (where one has been assigned) with the changes.

(4) The Regional Administrator shall review for approval changes to a response plan submitted pursuant to paragraph (d)(1) of this section for a facility determined pursuant to paragraph (f)(3) of this section to have the potential to cause significant and substantial harm to the environment.

(e) If the owner or operator of a facility determines pursuant to paragraph (a)(2) of this section that the facility could not, because of its location, reasonably be expected to cause substantial harm to the environment by discharging oil into or on the navigable waters or adjoining shorelines, the owner or operator shall complete and maintain at the facility the certification form contained in Appendix C to this part and, in the event an alternative formula that is comparable to one contained in Appendix C to this part is used to evaluate the criterion in paragraph (f)(1)(ii)(B) or (f)(1)(ii)(C) of this section, the owner or operator shall attach documentation to the certification form that demonstrates the reliability and analytical soundness of the comparable formula and shall notify the Regional Administrator in writing that an alternative formula was used.

(f)(1) A facility could, because of its location, reasonably be expected to cause substantial harm to the environment by discharging oil into or on the navigable waters or adjoining shorelines pursuant to paragraph (a)(2) of this section, if it meets any of the following criteria applied in accordance with the flowchart contained in Attachment C-1 to Appendix C to this part:

(i) The facility transfers oil over water to or from vessels and has a total oil storage capacity greater than or equal to 42,000 gallons; or

(ii) The facility's total oil storage capacity is greater than or equal to 1 million gallons, and one of the following is true:

(A) The facility does not have secondary containment for each aboveground storage area sufficiently large to contain the capacity of the largest aboveground oil storage tank within each storage area plus sufficient freeboard to allow for precipitation;

(B) The facility is located at a distance (as calculated using the appropriate formula in Appendix C to this part or a comparable formula) such that a

discharge from the facility could cause injury to fish and wildlife and sensitive environments. For further description of fish and wildlife and sensitive environments, see Appendices I, II, and III of the "Guidance for Facility and Vessel Response Plans: Fish and Wildlife and Sensitive Environments" (see Appendix E to this part, section 10, for availability) and the applicable Area Contingency Plan prepared pursuant to section 311(j)(4) of the Clean Water Act;

(C) The facility is located at a distance (as calculated using the appropriate formula in Appendix C to this part or a comparable formula) such that a discharge from the facility would shut down a public drinking water intake; or

(D) The facility has had a reportable oil spill in an amount greater than or equal to 10,000 gallons within the last 5 years.

(2)(i) To determine whether a facility could, because of its location, reasonably be expected to cause substantial harm to the environment by discharging oil into or on the navigable waters or adjoining shorelines pursuant to paragraph (b) of this section, the Regional Administrator shall consider the following:

(A) Type of transfer operation;

(B) Oil storage capacity;

(C) Lack of secondary containment;

(D) Proximity to fish and wildlife and sensitive environments and other areas determined by the Regional Administrator to possess ecological value;

(E) Proximity to drinking water intakes;

(F) Spill history; and

(G) Other site-specific characteristics and environmental factors that the Regional Administrator determines to be relevant to protecting the environment from harm by discharges of oil into or on navigable waters or adjoining shorelines.

(ii) Any person, including a member of the public or any representative from a Federal, State, or local agency who believes that a facility subject to this section could, because of its location, reasonably be expected to cause substantial harm to the environment by discharging oil into or on the navigable waters or adjoining shorelines may petition the Regional Administrator to determine whether the facility meets the criteria in paragraph (f)(2)(i) of this section. Such petition shall include a discussion of how the factors in paragraph (f)(2)(i) of this section apply to the facility in question. The RA shall consider such petitions and respond in an appropriate amount of time.

(3) To determine whether a facility could, because of its location,

reasonably be expected to cause significant and substantial harm to the environment by discharging oil into or on the navigable waters or adjoining shorelines, the Regional Administrator may consider the factors in paragraph (f)(2) of this section as well as the following:

- (i) Frequency of past spills;
- (ii) Proximity to navigable waters;
- (iii) Age of oil storage tanks; and
- (iv) Other facility-specific and Region-specific information, including local impacts on public health.

(g)(1) All facility response plans shall be consistent with the requirements of the National Oil and Hazardous Substance Pollution Contingency Plan (40 CFR part 300) and applicable Area Contingency Plans prepared pursuant to section 311(j)(4) of the Clean Water Act. The facility response plan should be coordinated with the local emergency response plan developed by the local emergency planning committee under section 303 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (42 U.S.C. 11001 et seq.). Upon request, the owner or operator should provide a copy of the facility response plan to the local emergency planning committee or State emergency response commission.

(2) The owner or operator shall review relevant portions of the National Oil and Hazardous Substances Pollution Contingency Plan and applicable Area Contingency Plan annually and, if necessary, revise the facility response plan to ensure consistency with these plans.

(3) The owner or operator shall review and update the facility response plan periodically to reflect changes at the facility.

(h) A response plan shall follow the format of the model facility-specific response plan included in Appendix F to this part, unless an equivalent response plan has been prepared to meet State or other Federal requirements. A response plan that does not follow the specified format in Appendix F to this part shall have an emergency response action plan as specified in paragraphs (h)(1) of this section and be supplemented with a cross-reference section to identify the location of the elements listed in paragraphs (h)(2) through (h)(10) of this section. To meet the requirements of this part, a response plan shall address the following elements, as further described in Appendix F to this part:

(1) *Emergency response action plan.* The response plan shall include an emergency response action plan in the format specified in paragraphs (h)(1)(i) through (viii) of this section that is

maintained in the front of the response plan, or as a separate document accompanying the response plan, and that includes the following information:

(i) The identity and telephone number of a qualified individual having full authority, including contracting authority, to implement removal actions;

(ii) The identity of individuals or organizations to be contacted in the event of a discharge so that immediate communications between the qualified individual identified in paragraph (h)(1) of this section and the appropriate Federal officials and the persons providing response personnel and equipment can be ensured;

(iii) A description of information to pass to response personnel in the event of a reportable spill;

(iv) A description of the facility's response equipment and its location;

(v) A description of response personnel capabilities, including the duties of persons at the facility during a response action and their response times and qualifications;

(vi) Plans for evacuation of the facility and a reference to community evacuation plans, as appropriate;

(vii) A description of immediate measures to secure the source of the discharge, and to provide adequate containment and drainage of spilled oil; and

(viii) A diagram of the facility.

(2) *Facility information.* The response plan shall identify and discuss the location and type of the facility, the identity and tenure of the present owner and operator, and the identity of the qualified individual identified in paragraph (h)(1) of this section.

(3) *Information about emergency response.* The response plan shall include:

(i) The identity of private personnel and equipment necessary to remove to the maximum extent practicable a worst case discharge and other discharges of oil described in paragraph (h)(5) of this section, and to mitigate or prevent a substantial threat of a worst case discharge (To identify response resources to meet the facility response plan requirements of this section, owners or operators shall follow Appendix E to this part or, where not appropriate, shall clearly demonstrate in the response plan why use of Appendix E of this part is not appropriate at the facility and make comparable arrangements for response resources);

(ii) Evidence of contracts or other approved means for ensuring the availability of such personnel and equipment;

(iii) The identity and the telephone number of individuals or organizations to be contacted in the event of a discharge so that immediate communications between the qualified individual identified in paragraph (h)(1) of this section and the appropriate Federal official and the persons providing response personnel and equipment can be ensured;

(iv) A description of information to pass to response personnel in the event of a reportable spill;

(v) A description of response personnel capabilities, including the duties of persons at the facility during a response action and their response times and qualifications;

(vi) A description of the facility's response equipment, the location of the equipment, and equipment testing;

(vii) Plans for evacuation of the facility and a reference to community evacuation plans, as appropriate;

(viii) A diagram of evacuation routes; and

(ix) A description of the duties of the qualified individual identified in paragraph (h)(1) of this section, that include:

(A) Activate internal alarms and hazard communication systems to notify all facility personnel;

(B) Notify all response personnel, as needed;

(C) Identify the character, exact source, amount, and extent of the release, as well as the other items needed for notification;

(D) Notify and provide necessary information to the appropriate Federal, State, and local authorities with designated response roles, including the National Response Center, State Emergency Response Commission, and Local Emergency Planning Committee;

(E) Assess the interaction of the spilled substance with water and/or other substances stored at the facility and notify response personnel at the scene of that assessment;

(F) Assess the possible hazards to human health and the environment due to the release. This assessment must consider both the direct and indirect effects of the release (i.e., the effects of any toxic, irritating, or asphyxiating gases that may be generated, or the effects of any hazardous surface water runoffs from water or chemical agents used to control fire and heat-induced explosion);

(G) Assess and implement prompt removal actions to contain and remove the substance released;

(H) Coordinate rescue and response actions as previously arranged with all response personnel;

(i) Use authority to immediately access company funding to initiate cleanup activities; and

(j) Direct cleanup activities until properly relieved of this responsibility.

(4) *Hazard evaluation.* The response plan shall discuss the facility's known or reasonably identifiable history of discharges reportable under 40 CFR part 110 for the entire life of the facility and shall identify areas within the facility where discharges could occur and what the potential effects of the discharges would be on the affected environment. To assess the range of areas potentially affected, owners or operators shall, where appropriate, consider the distance calculated in paragraph (f)(1)(ii) of this section to determine whether a facility could, because of its location, reasonably be expected to cause substantial harm to the environment by discharging oil into or on the navigable waters or adjoining shorelines.

(5) *Response planning levels.* The response plan shall include discussion of specific planning scenarios for:

(i) A worst case discharge, as calculated using the appropriate worksheet in Appendix D to this part. In cases where the Regional Administrator determines that the worst case discharge volume calculated by the facility is not appropriate, the Regional Administrator may specify the worst case discharge amount to be used for response planning at the facility. For complexes, the worst case planning quantity shall be the larger of the amounts calculated for each component of the facility;

(ii) A discharge of 2,100 gallons or less, provided that this amount is less than the worst case discharge amount. For complexes, this planning quantity shall be the larger of the amounts calculated for each component of the facility; and

(iii) A discharge greater than 2,100 gallons and less than or equal to 36,000 gallons or 10 percent of the capacity of the largest tank at the facility, whichever is less, provided that this amount is less than the worst case discharge amount. For complexes, this planning quantity shall be the larger of the amounts calculated for each component of the facility.

(6) *Discharge detection systems.* The response plan shall describe the procedures and equipment used to detect discharges.

(7) *Plan implementation.* The response plan shall describe:

(i) Response actions to be carried out by facility personnel or contracted personnel under the response plan to ensure the safety of the facility and to

mitigate or prevent discharges described in paragraph (h)(5) of this section or the substantial threat of such discharges;

(ii) A description of the equipment to be used for each scenario;

(iii) Plans to dispose of contaminated cleanup materials; and

(iv) Measures to provide adequate containment and drainage of spilled oil.

(8) *Self-inspection, drills/exercises, and response training.* The response plan shall include:

(i) A checklist and record of inspections for tanks, secondary containment, and response equipment;

(ii) A description of the drill/exercise program to be carried out under the response plan as described in § 112.21;

(iii) A description of the training program to be carried out under the response plan as described in § 112.21; and

(iv) Logs of discharge prevention meetings, training sessions, and drills/exercises. These logs may be maintained as an annex to the response plan.

(9) *Diagrams.* The response plan shall include site plan and drainage plan diagrams.

(10) *Security systems.* The response plan shall include a description of facility security systems.

(11) *Response plan cover sheet.* The response plan shall include a completed response plan cover sheet provided in Section 2.0 of Appendix F to this part.

(i)(1) In the event the owner or operator of a facility does not agree with the Regional Administrator's determination that the facility could, because of its location, reasonably be expected to cause substantial harm or significant and substantial harm to the environment by discharging oil into or on the navigable waters or adjoining shorelines, or that amendments to the facility response plan are necessary prior to approval, such as changes to the worst case discharge planning volume, the owner or operator may submit a request for reconsideration to the Regional Administrator and provide additional information and data in writing to support the request. The request and accompanying information must be submitted to the Regional Administrator within 60 days of receipt of notice of the Regional Administrator's original decision. The Regional Administrator shall consider the request and render a decision as rapidly as practicable.

(2) In the event the owner or operator of a facility believes a change in the facility's classification status is warranted because of an unplanned event or change in the facility's characteristics (i.e., substantial harm or significant and substantial harm), the

owner or operator may submit a request for reconsideration to the Regional Administrator and provide additional information and data in writing to support the request. The Regional Administrator shall consider the request and render a decision as rapidly as practicable.

(3) After a request for reconsideration under paragraph (i)(1) or (i)(2) of this section has been denied by the Regional Administrator, an owner or operator may appeal a determination made by the Regional Administrator. The appeal shall be made to the EPA Administrator and shall be made in writing within 60 days of receipt of the decision from the Regional Administrator that the request for reconsideration was denied. A complete copy of the appeal must be sent to the Regional Administrator at the time the appeal is made. The appeal shall contain a clear and concise statement of the issues and points of fact in the case. It also may contain additional information from the owner or operator, or from any other person. The EPA Administrator may request additional information from the owner or operator, or from any other person. The EPA Administrator shall render a decision as rapidly as practicable and shall notify the owner or operator of the decision.

§ 112.21 Facility response training and drills/exercises.

(a) The owner or operator of any facility required to prepare a facility response plan under § 112.20 shall develop and implement a facility response training program and a drill/exercise program that satisfy the requirements of this section. The owner or operator shall describe the programs in the response plan as provided in § 112.20(h)(8).

(b) The facility owner or operator shall develop a facility response training program to train those personnel involved in oil spill response activities. It is recommended that the training program be based on the USCG's Training Elements for Oil Spill Response, as applicable to facility operations. An alternative program can also be acceptable subject to approval by the Regional Administrator.

(1) The owner or operator shall be responsible for the proper instruction of facility personnel in the procedures to respond to discharges of oil and in applicable oil spill response laws, rules, and regulations.

(2) Training shall be functional in nature according to job tasks for both supervisory and non-supervisory operational personnel.

(3) Trainers shall develop specific lesson plans on subject areas relevant to facility personnel involved in oil spill response and cleanup.

(c) The facility owner or operator shall develop a program of facility response drills/exercises, including evaluation procedures. A program that follows the National Preparedness for Response Exercise Program (PREP) (see Appendix E to this part, section 10, for availability) will be deemed satisfactory for purposes of this section. An alternative program can also be acceptable subject to approval by the Regional Administrator.

6. Part 112 is amended by redesignating the appendix to Part 112 titled "Memorandum of Understanding Between the Secretary of Transportation and the Administrator of the Environmental Protection Agency" as Appendix A to Part 112.

Appendices B Through F Part 112 [Added]

7. Part 112 is amended by adding Appendices B through F to read as follows:

Appendix B to Part 112—Memorandum of Understanding Among the Secretary of the Interior, Secretary of Transportation, and Administrator of the Environmental Protection Agency

Purpose

This Memorandum of Understanding (MOU) establishes the jurisdictional responsibilities for offshore facilities, including pipelines, pursuant to section 311 (j)(1)(c), (j)(5), and (j)(6)(A) of the Clean Water Act (CWA), as amended by the Oil Pollution Act of 1990 (Public Law 101-380). The Secretary of the Department of the Interior (DOI), Secretary of the Department of Transportation (DOT), and Administrator of the Environmental Protection Agency (EPA) agree to the division of responsibilities set forth below for spill prevention and control, response planning, and equipment inspection activities pursuant to those provisions.

Background

Executive Order (E.O.) 12777 (56 FR 54757) delegates to DOI, DOT, and EPA various responsibilities identified in section 311(j) of the CWA. Sections 2(b)(3), 2(d)(3), and 2(e)(3) of E.O. 12777 assigned to DOI spill prevention and control, contingency planning, and equipment inspection activities associated with offshore facilities. Section 311(a)(11) defines the term "offshore facility" to include facilities of any kind located in, on, or under navigable waters of the United States. By using this definition, the traditional DOI role of regulating facilities on the Outer Continental Shelf is expanded by E.O. 12777 to include inland lakes, rivers, streams, and any other inland waters.

Responsibilities

Pursuant to section 2(i) of E.O. 12777, DOI redelegates, and EPA and DOT agree to

assume, the functions vested in DOI by sections 2(b)(3), 2(d)(3), and 2(e)(3) of E.O. 12777 as set forth below. For purposes of this MOU, the term "coast line" shall be defined as in the Submerged Lands Act (43 U.S.C. 1301(c)) to mean "the line of ordinary low water along that portion of the coast which is in direct contact with the open sea and the line marking the seaward limit of inland waters."

1. To EPA, DOI redelegates responsibility for non-transportation-related offshore facilities located landward of the coast line.

2. To DOT, DOI redelegates responsibility for transportation-related facilities, including pipelines, located landward of the coast line. The DOT retains jurisdiction for deepwater ports and their associated seaward pipelines, as delegated by E.O. 12777.

3. The DOI retains jurisdiction over facilities, including pipelines, located seaward of the coast line, except for deepwater ports and associated seaward pipelines delegated by E.O. 12777 to DOT.

Effective Date

This MOU is effective on the date of the final execution by the indicated signatories.

Limitations

1. The DOI, DOT, and EPA may agree in writing to exceptions to this MOU on a facility-specific basis. Affected parties will receive notification of the exceptions.

2. Nothing in this MOU is intended to replace, supersede, or modify any existing agreements between or among DOI, DOT, or EPA.

Modification and Termination

Any party to this agreement may propose modifications by submitting them in writing to the heads of the other agency/department. No modification may be adopted except with the consent of all parties. All parties shall indicate their consent to or disagreement with any proposed modification within 60 days of receipt. Upon the request of any party, representatives of all parties shall meet for the purpose of considering exceptions or modifications to this agreement. This MOU may be terminated only with the mutual consent of all parties.

Dated: November 8, 1993.

Bruce Babbitt,

Secretary of the Interior.

Dated: December 14, 1993.

Federico Peña,

Secretary of Transportation.

Dated: February 3, 1994.

Carol M. Browner,

Administrator, Environmental Protection Agency.

Appendix C to Part 112—Substantial Harm Criteria

1.0 Introduction

The flowchart provided in Attachment C-1 to this appendix shows the decision tree with the criteria to identify whether a facility "could reasonably be expected to cause substantial harm to the environment by discharging into or on the navigable waters or adjoining shorelines." In addition, the

Regional Administrator has the discretion to identify facilities that must prepare and submit facility-specific response plans to EPA.

1.1 Definitions

1.1.1 *Great Lakes* means Lakes Superior, Michigan, Huron, Erie, and Ontario, their connecting and tributary waters, the Saint Lawrence River as far as Saint Regis, and adjacent port areas.

1.1.2 Higher Volume Port Areas include

- (1) Boston, MA;
- (2) New York, NY;
- (3) Delaware Bay and River to Philadelphia, PA;
- (4) St. Croix, VI;
- (5) Pascagoula, MS;
- (6) Mississippi River from Southwest Pass, LA to Baton Rouge, LA;
- (7) Louisiana Offshore Oil Port (LOOP), LA;
- (8) Lake Charles, LA;
- (9) Sabine-Neches River, TX;
- (10) Galveston Bay and Houston Ship Channel, TX;
- (11) Corpus Christi, TX;
- (12) Los Angeles/Long Beach Harbor, CA;
- (13) San Francisco Bay, San Pablo Bay, Carquinez Strait, and Suisun Bay to Antioch, CA;
- (14) Straits of Juan de Fuca from Port Angeles, WA to and including Puget Sound, WA;
- (15) Prince William Sound, AK; and
- (16) Others as specified by the Regional Administrator for any EPA Region.

1.1.3 *Inland Area* means the area shoreward of the boundary lines defined in 46 CFR part 7, except in the Gulf of Mexico. In the Gulf of Mexico, it means the area shoreward of the lines of demarcation (COLREG lines as defined in 33 CFR 80.740—80.850). The inland area does not include the Great Lakes.

1.1.4 *Rivers and Canals* means a body of water confined within the inland area, including the Intracoastal Waterways and other waterways artificially created for navigating that have project depths of 12 feet or less.

2.0 Description of Screening Criteria for the Substantial Harm Flowchart

A facility that has the potential to cause substantial harm to the environment in the event of a discharge must prepare and submit a facility-specific response plan to EPA in accordance with Appendix F to this part. A description of the screening criteria for the substantial harm flowchart is provided below:

2.1 *Non-Transportation-Related Facilities With a Total Oil Storage Capacity Greater Than or Equal to 42,000 Gallons Where Operations Include Over-Water Transfers of Oil.* A non-transportation-related facility with a total oil storage capacity greater than 42,000 gallons that transfers oil over water to or from vessels must submit a response plan to EPA. Daily oil transfer operations at these types of facilities occur between barges and vessels and onshore bulk storage tanks over open water. These facilities are located adjacent to navigable water.

2.2 *Lack of Adequate Secondary Containment at Facilities With a Total Oil Storage Capacity Greater Than or Equal to 1 Million Gallons.* Any facility with a total oil storage capacity greater than or equal to 1 million gallons without secondary containment sufficiently large to contain the capacity of the largest aboveground oil storage tank within each area plus sufficient freeboard to allow for precipitation must submit a response plan to EPA. Secondary containment structures that meet the standard of good engineering practice for the purposes of this part include berms, dikes, retaining walls, curbing, culverts, gutters, or other drainage systems.

2.3 *Proximity to Fish and Wildlife and Sensitive Environments at Facilities With a Total Oil Storage Capacity Greater Than or Equal to 1 Million Gallons.* A facility with a total oil storage capacity greater than or equal to 1 million gallons must submit its response plan if it is located at a distance such that a discharge from the facility could cause injury (as defined at 40 CFR 112.2) to fish and wildlife and sensitive environments. For further description of fish and wildlife and sensitive environments, see Appendices I, II, and III to DOC/NOAA's "Guidance for Facility and Vessel Response Plans: Fish and Wildlife and Sensitive Environments" (see Appendix E to this part, section 10, for availability) and the applicable Area

Contingency Plan. Facility owners or operators must determine the distance at which an oil spill could cause injury to fish and wildlife and sensitive environments using the appropriate formula presented in Attachment C-III to this appendix or a comparable formula.

2.4 *Proximity to Public Drinking Water Intakes at Facilities with a Total Storage Oil Capacity Greater Than or Equal to 1 Million Gallons.* A facility with a total storage capacity greater than or equal to 1 million gallons must submit its response plan if it is located at a distance such that a discharge from the facility would shut down a public drinking water intake, which is analogous to a public water system as described at 40 CFR 143.2(c). The distance at which an oil spill from an SPCC-regulated facility would shut down a public drinking water intake shall be calculated using the appropriate formula presented in Attachment C-III to this appendix or a comparable formula.

2.5 *Facilities That Have Experienced Reportable Oil Spills in an Amount Greater Than or Equal to 10,000 Gallons Within the Past 5 Years and That Have a Total Oil Storage Capacity Greater Than or Equal to 1 Million Gallons.* A facility's oil spill history within the past 5 years shall be considered in the evaluation for substantial harm. Any facility with a total oil storage capacity greater than or equal to 1 million gallons that

has experienced a reportable oil spill in an amount greater than or equal to 10,000 gallons within the past 5 years must submit a response plan to EPA.

3.0 *Certification for Facilities That Do Not Pose Substantial Harm*

If the facility does not meet the substantial harm criteria listed in Attachment C-I to this appendix, the owner or operator shall complete and maintain at the facility the certification form contained in Attachment C-II to this appendix. In the event an alternative formula that is comparable to the one in this appendix is used to evaluate the substantial harm criteria, the owner or operator shall attach documentation to the certification form that demonstrates the reliability and analytical soundness of the comparable formula and shall notify the Regional Administrator in writing that an alternative formula was used.

4.0 *References*

Chow, V.T. 1959. Open Channel Hydraulics. McGraw Hill.

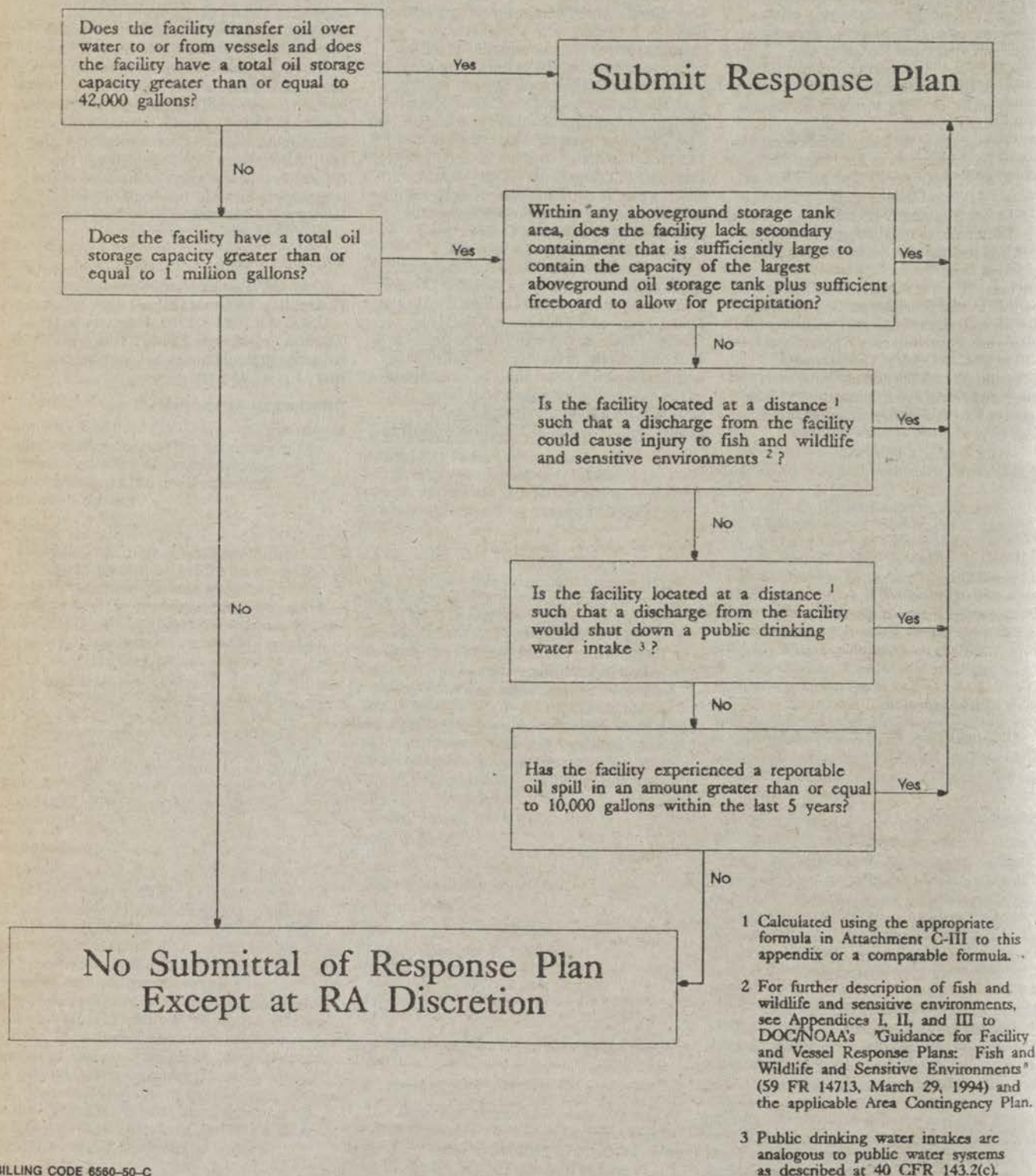
USCG IFR (58 FR 7353, February 5, 1993). This document is available through EPA's rulemaking docket as noted in Appendix E to this part, section 10.

Attachments to Appendix C

6580-50-P

Attachment C - I

Flowchart of Criteria for Substantial Harm



Attachment C-II—Certification of the Applicability of the Substantial Harm Criteria

Facility Name: _____
 Facility Addresses: _____

1. Does the facility transfer oil over water to or from vessels and does the facility have a total oil storage capacity greater than or equal to 42,000 gallons?
 Yes _____ No _____

2. Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and does the facility lack secondary containment that is sufficiently large to contain the capacity of the largest aboveground oil storage tank plus sufficient freeboard to allow for precipitation within any aboveground oil storage tank area?
 Yes _____ No _____

3. Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and is the facility located at a distance (as calculated using the appropriate formula in Attachment C-III to this appendix or a comparable formula¹) such that a discharge from the facility could cause injury to fish and wildlife and sensitive environments? For further description of fish and wildlife and sensitive environments, see Appendices I, II, and III to DOC/NOAA's "Guidance for Facility and Vessel Response Plans: Fish and Wildlife and Sensitive Environments" (see Appendix E to this part, section 10, for availability) and the applicable Area Contingency Plan.
 Yes _____ No _____

4. Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and is the facility located at a distance (as calculated using the appropriate formula in Attachment C-III to this appendix or a comparable formula¹) such that a discharge from the facility would shut down a public drinking water intake?²
 Yes _____ No _____

5. Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and has the facility experienced a reportable oil spill in an amount greater than or equal to 10,000 gallons within the last 5 years?
 Yes _____ No _____

Certification

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document, and that based on my inquiry of those individuals responsible for obtaining this information, I believe that the submitted information is true, accurate, and complete.

Signature _____

Name (please type or print) _____

Title _____

¹If a comparable formula is used documentation of the reliability and analytical soundness of the comparable formula must be attached to this form.

²For the purposes of 40 CFR part 112, public drinking water intakes are analogous to public water systems as described at 40 CFR 143.2(c).

Date _____

Attachment C-III—Calculation of the Planning Distance**1.0 Introduction**

1.1 The facility owner or operator must evaluate whether the facility is located at a distance such that a discharge from the facility could cause injury to fish and wildlife and sensitive environments or disrupt operations at a public drinking water intake. To quantify that distance, EPA considered oil transport mechanisms over land and on still, tidal influence, and moving navigable waters. EPA has determined that the primary concern for calculation of a planning distance is the transport of oil in navigable waters during adverse weather conditions. Therefore, two formulas have been developed to determine distances for planning purposes from the point of discharge at the facility to the potential site of impact on moving and still waters, respectively. The formula for oil transport on moving navigable water is based on the velocity of the water body and the time interval for arrival of response resources. The still water formula accounts for the spread of discharged oil over the surface of the water. The method to determine oil transport on tidal influence areas is based on the type of oil spilled and the distance down current during ebb tide and up current during flood tide to the point of maximum tidal influence.

1.2 EPA's formulas were designed to be simple to use. However, facility owners or operators may calculate planning distances using more sophisticated formulas, which take into account broader scientific or engineering principles, or local conditions. Such comparable formulas may result in different planning distances than EPA's formulas. In the event that an alternative formula that is comparable to one contained in this appendix is used to evaluate the criterion in 40 CFR 112.20(f)(1)(ii)(B) or (f)(1)(ii)(C), the owner or operator shall attach documentation to the response plan cover sheet contained in Appendix F to this part that demonstrates the reliability and analytical soundness of the alternative formula and shall notify the Regional Administrator in writing that an alternative formula was used.¹

1.3 A regulated facility may meet the criteria for the potential to cause substantial harm to the environment without having to perform a planning distance calculation. For facilities that meet the substantial harm criteria because of inadequate secondary containment or oil spill history, as listed in

¹For persistent oils or non-persistent oils, a worst case trajectory model (i.e., an alternative formula) may be substituted for the distance formulas described in still, moving, and tidal waters, subject to Regional Administrator's review of the model. An example of an alternative formula that is comparable to the one contained in this appendix would be a worst case trajectory calculation based on credible adverse winds, currents, and/or river stages, over a range of seasons, weather conditions, and river stages. Based on historical information or a spill trajectory model, the Agency may require that additional fish and wildlife and sensitive environments or public drinking water intakes also be protected.

the flowchart in Attachment C-I to this appendix, calculation of the planning distance is unnecessary. For facilities that do not meet the substantial harm criteria for secondary containment or oil spill history as listed in the flowchart, calculation of a planning distance for proximity to fish and wildlife and sensitive environments and public drinking water intakes is required, unless it is clear without performing the calculation (e.g., the facility is located in a wetland) that these areas would be impacted.

1.4 A facility owner or operator who must perform a planning distance calculation on navigable water is only required to do so for the type of navigable water conditions (i.e., moving water, still water, or tidal-influenced water) applicable to the facility. If a facility owner or operator determines that more than one type of navigable water condition applies, then the facility owner or operator is required to perform a planning distance calculation for each navigable water type to determine the greatest single distance that oil may be transported. As a result, the final planning distance for oil transport on water shall be the greatest individual distance rather than a summation of each calculated planning distance.

1.5 The planning distance formula for transport on moving waterways contains three variables: the velocity of the navigable water (v), the response time interval (t), and a conversion factor (c). The velocity, v , is determined by using the Chezy-Manning equation, which, in this case, models the flood flow rate of water in open channels. The Chezy-Manning equation contains three variables which must be determined by facility owners or operators. Manning's Roughness Coefficient (for flood flow rates), n , can be determined from Table 1 of this attachment. The hydraulic radius, r , can be estimated using the average mid-channel depth from charts provided by the sources listed in Table 2 of this attachment. The average slope of the river, s , can be determined using topographic maps that can be ordered from the U.S. Geological Survey, as listed in Table 2 of this attachment.

1.6 Table 3 of this attachment contains specified time intervals for estimating the arrival of response resources at the scene of a discharge. Assuming no prior planning, response resources should be able to arrive at the discharge site within 12 hours of the discovery of any oil discharge in Higher Volume Port Areas and within 24 hours in Great Lakes and all other river, canal, inland, and nearshore areas. The specified time intervals in Table 3 of Appendix C are to be used only to aid in the identification of whether a facility could cause substantial harm to the environment. Once it is determined that a plan must be developed for the facility, the owner or operator shall reference Appendix E to this part to determine appropriate resource levels and response times. The specified time intervals of this appendix include a 3-hour time period for deployment of boom and other response equipment. The Regional Administrator may identify additional areas as appropriate.

2.0 Oil Transport on Moving Navigable Waters

2.1 The facility owner or operator must use the following formula or a comparable formula as described in § 112.20(a)(3) to calculate the planning distance for oil transport on moving navigable water:

$d = v \times t \times c$; where

d: the distance downstream from a facility within which fish and wildlife and sensitive environments could be injured or a public drinking water intake would be shut down in the event of an oil discharge (in miles);

v: the velocity of the river/navigable water of concern (in ft/sec) as determined by Chezy-Manning's equation (see below and Tables 1 and 2 of this attachment);

t: the time interval specified in Table 3 based upon the type of water body and location (in hours); and

c: constant conversion factor 0.68 sec/mile/hr (3600 sec/hr + 5280 ft/mile).

2.2 Chezy-Manning's equation is used to determine velocity:

$v = 1.48/n \times r^{2/3} \times s^{1/2}$; where

v: the velocity of the river of concern (in ft/sec);

n: Manning's Roughness Coefficient from Table 1 of this attachment;

r: the hydraulic radius; the hydraulic radius can be approximated for parabolic channels by multiplying the average mid-channel depth of the river (in feet) by 0.667 (sources for obtaining the mid-channel depth are listed in Table 2 of this attachment); and

s: the average slope of the river (unitless) obtained from U.S. Geological Survey topographic maps at the address listed in Table 2 of this attachment.

TABLE 1.—MANNING'S ROUGHNESS COEFFICIENT FOR NATURAL STREAMS

[NOTE: Coefficients are presented for high flow rates at or near flood stage.]

Stream description	Roughness coefficient (n)
Minor Streams (Top Width <100 ft.)	
Clean:	
Straight	0.03
Winding04
Sluggish (Weedy, deep pools):	
No trees or brush06
Trees and/or brush10
Major Streams (Top Width >100 ft.)	
Regular section:	
No boulders/brush035
Irregular section:	
(Brush)05

TABLE 2.—SOURCES OF R AND S FOR THE CHEZY-MANNING EQUATION

All of the charts and related publications for navigational waters may be ordered from:
Distribution Branch
(N/CG33)
National Ocean Service
Riverdale, Maryland 20737-1199

TABLE 2.—SOURCES OF R AND S FOR THE CHEZY-MANNING EQUATION—Continued

Phone: (301) 436-6990

There will be a charge for materials ordered and a VISA or Mastercard will be accepted.

The mid-channel depth to be used in the calculation of the hydraulic radius (r) can be obtained directly from the following sources:

Charts of Canadian Coastal and Great Lakes Waters:

Canadian Hydrographic Service
Department of Fisheries and Oceans Institute

P.O. Box 8080
1675 Russell Road
Ottawa, Ontario K1G 3H6
Canada
Phone: (613) 998-4931

Charts and Maps of Lower Mississippi River

(Gulf of Mexico to Ohio River and St. Francis, White, Big Sunflower, Atchafalaya, and other rivers):

U.S. Army Corps of Engineers
Vicksburg District
P.O. Box 60
Vicksburg, Mississippi 39180
Phone: (601) 634-5000

Charts of Upper Mississippi River and Illinois Waterway to Lake Michigan:

U.S. Army Corps of Engineers
Rock Island District
P.O. Box 2004
Rock Island, Illinois 61204
Phone: (309) 794-5552

Charts of Missouri River:

U.S. Army Corps of Engineers
Omaha District
6014 U.S. Post Office and Courthouse
Omaha, Nebraska 68102
Phone: (402) 221-3900

Charts of Ohio River:

U.S. Army Corps of Engineers
Ohio River Division
P.O. Box 1159
Cincinnati, Ohio 45201
Phone: (513) 684-3002

Charts of Tennessee Valley Authority Reservoirs, Tennessee River and Tributaries:

Tennessee Valley Authority
Maps and Engineering Section
416 Union Avenue
Knoxville, Tennessee 37902
Phone: (615) 632-2921

Charts of Black Warrior River, Alabama River, Tombigbee River, Apalachicola River and Pearl River:

U.S. Army Corps of Engineers
Mobile District
P.O. Box 2288
Mobile, Alabama 36628-0001
Phone: (205) 690-2511

The average slope of the river (s) may be obtained from topographic maps:

U.S. Geological Survey
Map Distribution
Federal Center
Bldg. 41
Box 25286

TABLE 2.—SOURCES OF R AND S FOR THE CHEZY-MANNING EQUATION—Continued

Denver, Colorado 80225

Additional information can be obtained from the following sources:

1. The State's Department of Natural Resources (DNR) or the State's Aids to Navigation office;
2. A knowledgeable local marina operator; or
3. A knowledgeable local water authority (e.g., State water commission)

2.3 The average slope of the river (s) can be determined from the topographic maps using the following steps:

(1) Locate the facility on the map.

(2) Find the Normal Pool Elevation at the point of discharge from the facility into the water (A).

(3) Find the Normal Pool Elevation of the public drinking water intake or fish and wildlife and sensitive environment located downstream (B) (Note: The owner or operator should use a minimum of 20 miles downstream as a cutoff to obtain the average slope if the location of a specific public drinking water intake or fish and wildlife and sensitive environment is unknown).

(4) If the Normal Pool Elevation is not available, the elevation contours can be used to find the slope. Determine elevation of the water at the point of discharge from the facility (A). Determine the elevation of the water at the appropriate distance downstream (B). The formula presented below can be used to calculate the slope.

(5) Determine the distance (in miles) between the facility and the public drinking water intake or fish and wildlife and sensitive environments (C).

(6) Use the following formula to find the slope, which will be a unitless value:
Average Slope = [(A-B) (ft)/C (miles)] × [1 mile/5280 feet]

2.4 If it is not feasible to determine the slope and mid-channel depth by the Chezy-Manning equation, then the river velocity can be approximated on-site. A specific length, such as 100 feet, can be marked off along the shoreline. A float can be dropped into the stream above the mark, and the time required for the float to travel the distance can be used to determine the velocity in feet per second. However, this method will not yield an average velocity for the length of the stream, but a velocity only for the specific location of measurement. In addition, the flow rate will vary depending on weather conditions such as wind and rainfall. It is recommended that facility owners or operators repeat the measurement under a variety of conditions to obtain the most accurate estimate of the surface water velocity under adverse weather conditions.

2.5 The planning distance calculations for moving and still navigable waters are based on worst case discharges of persistent oils. Persistent oils are of concern because they can remain in the water for significant periods of time and can potentially exist in large quantities downstream. Owners or operators of facilities that store persistent as well as non-persistent oils may use a

comparable formula. The volume of oil discharged is not included as part of the planning distance calculation for moving navigable waters. Facilities that will meet this substantial harm criterion are those with facility capacities greater than or equal to 1 million gallons. It is assumed that these facilities are capable of having an oil discharge of sufficient quantity to cause injury to fish and wildlife and sensitive environments or shut down a public drinking water intake. While owners or operators of transfer facilities that store greater than or equal to 42,000 gallons are not required to use a planning distance formula for purposes of the substantial harm criteria, they should use a planning distance calculation in the development of facility-specific response plans.

TABLE 3.—SPECIFIED TIME INTERVALS

Operating areas	Substantial harm planning time (hrs)
Higher volume port area.	12 hour arrival+3 hour deployment=15 hours.
Great Lakes.	24 hour arrival+3 hour deployment=27 hours.
All other rivers and canals, inland, and near-shore areas.	24 hour arrival+3 hour deployment=27 hours.

2.6 *Example of the Planning Distance Calculation for Oil Transport on Moving Navigable Waters.* The following example provides a sample calculation using the planning distance formula for a facility discharging oil into the Monongahela River:

(1) Solve for v by evaluating n , r , and s for the Chezy-Manning equation:

Find the roughness coefficient, n , on Table 1 of this attachment for a regular section of a major stream with a top width greater than 100 feet. The top width of the river can be found from the topographic map.

$n=0.035$.

Find slope, s , where $A=727$ feet, $B=710$ feet, and $C=25$ miles.

Solving:

$$s = [(727 \text{ ft} - 710 \text{ ft}) / 25 \text{ miles}] \times [1 \text{ mile} / 5280 \text{ feet}] = 1.3 \times 10^{-4}$$

The average mid-channel depth is found by averaging the mid-channel depth for each mile along the length of the river between the facility and the public drinking water intake or the fish or wildlife or sensitive environment (or 20 miles downstream if applicable). This value is multiplied by 0.667 to obtain the hydraulic radius. The mid-channel depth is found by obtaining values for r and s from the sources shown in Table 2 for the Monongahela River.

Solving:

$$r = 0.667 \times 20 \text{ feet} = 13.33 \text{ feet}$$

Solve for v using:

$$v = 1.49 / n r^{2/3} s^{1/2}$$

$$v = [1.5 / 0.035] \times [(13.33)^{2/3} \times (1.3 \times 10^{-4})^{1/2}]$$

$$v = 2.73 \text{ feet/second}$$

(2) Find t from Table 3 of this attachment. The Monongahela River's resource response time is 27 hours.

(3) Solve for planning distance, d :

$$d = v \times t \times c$$

$$d = (2.73 \text{ ft/sec}) \times (27 \text{ hours}) \times (0.68 \text{ sec} \cdot \text{mile} / \text{hr} \cdot \text{ft})$$

$$d = 50 \text{ miles}$$

Therefore, 50 miles downstream is the appropriate planning distance for this facility.

3.0 Oil Transport on Still Water

3.1 For bodies of water including lakes or ponds that do not have a measurable velocity, the spreading of the oil over the surface must be considered. Owners or operators of facilities located next to still water bodies may use a comparable means of calculating the planning distance. If a comparable formula is used, documentation of the reliability and analytical soundness of the comparable calculation must be attached to the response plan cover sheet.

3.2 *Example of the Planning Distance Calculation for Oil Transport on Still Water.* To assist those facilities which could potentially discharge into a still body of water, the following analysis was performed to provide an example of the type of formula that may be used to calculate the planning distance. For this example, a worst case discharge of 2,000,000 gallons is used.

(1) The surface area in square feet covered by an oil spill on still water, A_1 , can be determined by the following formula,² where V is the volume of the spill in gallons and C is a constant conversion factor:

$$A_1 = 10^5 \times V^{2/3} \times C$$

$$C = 0.1643$$

$$A_1 = 10^5 \times (2,000,000 \text{ gallons})^{2/3} \times (0.1643)$$

$$A_1 = 8.74 \times 10^8 \text{ ft}^2$$

(2) The spreading formula is based on the theoretical condition that the oil will spread uniformly in all directions forming a circle. In reality, the outfall of the discharge will direct the oil to the surface of the water where it intersects the shoreline. Although the oil will not spread uniformly in all directions, it is assumed that the discharge will spread from the shoreline into a semi-circle (this assumption does not account for winds or wave action).

(3) The area of a circle $= \pi r^2$

(4) To account for the assumption that oil will spread in a semi-circular shape, the area of a circle is divided by 2 and is designated as A_2 .

$$A_2 = (\pi r^2) / 2$$

Solving for the radius, r , using the relationship $A_1 = A_2$: $8.74 \times 10^8 \text{ ft}^2 = (\pi r^2) / 2$

$$\text{Therefore, } r = 23,586 \text{ ft}$$

$$r = 23,586 \text{ ft} \times 5,280 \text{ ft/mile} = 4.5 \text{ miles}$$

Assuming a 20 knot wind under storm conditions:

$$1 \text{ knot} = 1.15 \text{ miles/hour}$$

$$20 \text{ knots} \times 1.15 \text{ miles/hour/knot} = 23 \text{ miles/hr}$$

$$23 \text{ miles/hr} \times 4.5 \text{ miles} = 103.5 \text{ miles}$$

$$103.5 \text{ miles} \times 0.68 \text{ sec} \cdot \text{mile} / \text{hr} \cdot \text{ft} = 70.37 \text{ miles}$$

$$70.37 \text{ miles} \times 0.68 \text{ sec} \cdot \text{mile} / \text{hr} \cdot \text{ft} = 47.85 \text{ miles}$$

$$47.85 \text{ miles} \times 0.68 \text{ sec} \cdot \text{mile} / \text{hr} \cdot \text{ft} = 32.54 \text{ miles}$$

$$32.54 \text{ miles} \times 0.68 \text{ sec} \cdot \text{mile} / \text{hr} \cdot \text{ft} = 22.13 \text{ miles}$$

$$22.13 \text{ miles} \times 0.68 \text{ sec} \cdot \text{mile} / \text{hr} \cdot \text{ft} = 15.05 \text{ miles}$$

$$15.05 \text{ miles} \times 0.68 \text{ sec} \cdot \text{mile} / \text{hr} \cdot \text{ft} = 10.23 \text{ miles}$$

$$10.23 \text{ miles} \times 0.68 \text{ sec} \cdot \text{mile} / \text{hr} \cdot \text{ft} = 6.96 \text{ miles}$$

$$6.96 \text{ miles} \times 0.68 \text{ sec} \cdot \text{mile} / \text{hr} \cdot \text{ft} = 4.73 \text{ miles}$$

$$4.73 \text{ miles} \times 0.68 \text{ sec} \cdot \text{mile} / \text{hr} \cdot \text{ft} = 3.21 \text{ miles}$$

$$3.21 \text{ miles} \times 0.68 \text{ sec} \cdot \text{mile} / \text{hr} \cdot \text{ft} = 2.17 \text{ miles}$$

$$2.17 \text{ miles} \times 0.68 \text{ sec} \cdot \text{mile} / \text{hr} \cdot \text{ft} = 1.48 \text{ miles}$$

$$1.48 \text{ miles} \times 0.68 \text{ sec} \cdot \text{mile} / \text{hr} \cdot \text{ft} = 1.01 \text{ miles}$$

Assuming that the oil slick moves at 3

percent of the wind's speed:³

$$23 \text{ miles/hour} \times 0.03 = 0.69 \text{ miles/hour}$$

(5) To estimate the distance that the oil will travel, use the times required for response resources to arrive at different geographic locations as shown in Table 3 of this attachment.

For example:

$$\text{For Higher Volume Port Areas: } 15 \text{ hrs} \times 0.69 \text{ miles/hr} = 10.4 \text{ miles}$$

$$\text{For Great Lakes and all other areas: } 27 \text{ hrs} \times 0.69 \text{ miles/hr} = 18.6 \text{ miles}$$

(6) The total distance that the oil will travel from the point of discharge, including the distance due to spreading, is calculated as follows:

$$\text{Higher Volume Port Areas: } d = 10.4 + 4.5 \text{ miles or approximately 15 miles}$$

$$\text{Great Lakes and all other areas: } d = 18.6 + 4.5 \text{ miles or approximately 23 miles}$$

4.0 Oil Transport on Tidal-Influence Areas

4.1 The planning distance method for tidal influence navigable water is based on worst case discharges of persistent and non-persistent oils. Persistent oils are of primary concern because they can potentially cause harm over a greater distance. For persistent oils discharged into tidal waters, the planning distance is 15 miles from the facility down current during ebb tide and to the point of maximum tidal influence or 15 miles, whichever is less, during flood tide.

4.2 For non-persistent oils discharged into tidal waters, the planning distance is 5 miles from the facility down current during ebb tide and to the point of maximum tidal influence or 5 miles, whichever is less, during flood tide.

4.3 *Example of Determining the Planning Distance for Two Types of Navigable Water Conditions.* Below is an example of how to determine the proper planning distance when a facility could impact two types of navigable water conditions: moving water and tidal water.

(1) Facility X stores persistent oil and is located downstream from locks along a slow moving river which is affected by tides. The river velocity, v , is determined to be 0.5 feet/second from the Chezy-Manning equation used to calculate oil transport on moving navigable waters. The specified time interval, t , obtained from Table 3 of this attachment for river areas is 27 hours. Therefore, solving for the planning distance, d :

$$d = v \times t \times c$$

$$d = (0.5 \text{ ft/sec}) \times (27 \text{ hours}) \times (0.68 \text{ sec} \cdot \text{mile} / \text{hr} \cdot \text{ft})$$

$$d = 9.18 \text{ miles}$$

(2) However, the planning distance for maximum tidal influence down current during ebb tide is 15 miles, which is greater than the calculated 9.18 miles. Therefore, 15 miles downstream is the appropriate planning distance for this facility.

5.0 Oil Transport Over Land

5.1 Facility owners or operators must evaluate the potential for oil to be

² Huang, J.C. and Monastero, F.C., 1982. *Review of the State-of-the-Art of Oil Pollution Models*. Final report submitted to the American Petroleum Institute by Raytheon Ocean Systems, Co., East Providence, Rhode Island.

³ *Oil Spill Prevention & Control*. National Spill Control School, Corpus Christi State University, Thirteenth Edition, May 1990.

transported over land to navigable waters of the United States. The owner or operator must evaluate the likelihood that portions of a worst case discharge would reach navigable waters via open channel flow or from sheet flow across the land, or be prevented from reaching navigable waters when trapped in natural or man-made depressions excluding secondary containment structures.

5.2 As discharged oil travels over land, it may enter a storm drain or open concrete channel intended for drainage. It is assumed that once oil reaches such an inlet, it will flow into the receiving navigable water. During a storm event, it is highly probable that the oil will either flow into the drainage structures or follow the natural contours of the land and flow into the navigable water. Expected minimum and maximum velocities are provided as examples of open concrete channel and pipe flow. The ranges listed below reflect minimum and maximum velocities used as design criteria.⁴ The calculation below demonstrates that the time required for oil to travel through a storm drain or open concrete channel to navigable water is negligible and can be considered instantaneous. The velocities are:

For open concrete channels:

maximum velocity=25 feet per second

minimum velocity=3 feet per second

For storm drains:

maximum velocity=25 feet per second

minimum velocity=2 feet per second

5.3 Assuming a length of 0.5 mile from the point of discharge through an open concrete channel or concrete storm drain to

a navigable water, the travel times (distance/velocity) are:

1.8 minutes at a velocity of 25 feet per second

14.7 minutes at a velocity of 3 feet per second

22.0 minutes for at a velocity of 2 feet per second

5.4 The distances that shall be considered to determine the planning distance are illustrated in Figure C-1 of this attachment. The relevant distances can be described as follows:

D1=Distance from the nearest opportunity for discharge, X_1 , to a storm drain or an open concrete channel leading to navigable water.

D2=Distance through the storm drain or open concrete channel to navigable water.

D3=Distance downstream from the outfall within which fish and wildlife and sensitive environments could be injured or a public drinking water intake would be shut down as determined by the planning distance formula.

D4=Distance from the nearest opportunity for discharge, X_2 , to fish and wildlife and sensitive environments not bordering navigable water.

5.5 A facility owner or operator whose nearest opportunity for discharge is located within 0.5 mile of a navigable water must complete the planning distance calculation (D3) for the type of navigable water near the facility or use a comparable formula.

5.6 A facility that is located at a distance greater than 0.5 mile from a navigable water must also calculate a planning distance (D3) if it is in close proximity (i.e., D1 is less than 0.5 mile and other factors are conducive to oil travel over land) to storm drains that flow

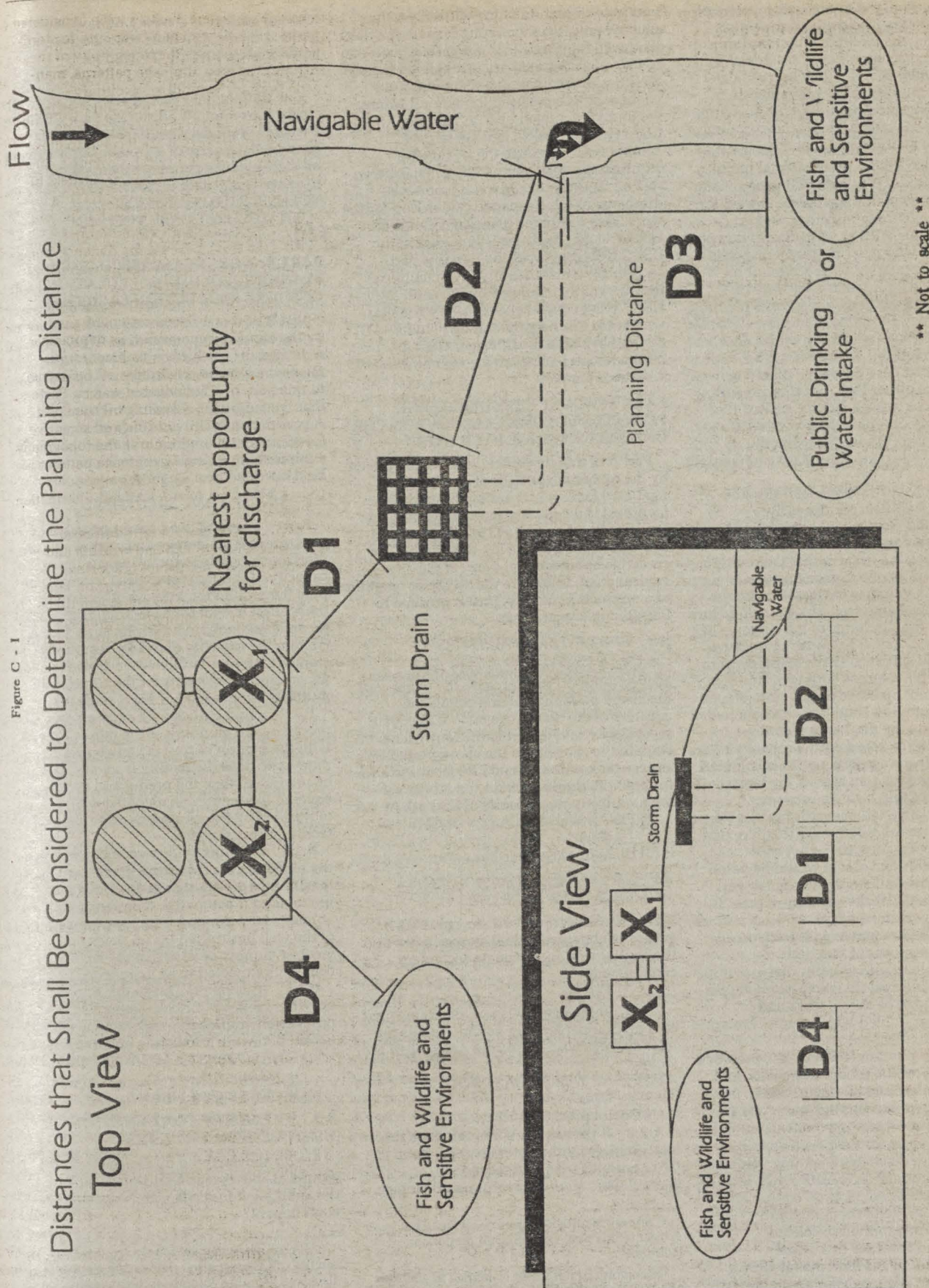
to navigable waters. Factors to be considered in assessing oil transport over land to storm drains shall include the topography of the surrounding area, drainage patterns, man-made barriers (excluding secondary containment structures), and soil distribution and porosity. Storm drains or concrete drainage channels that are located in close proximity to the facility can provide a direct pathway to navigable waters, regardless of the length of the drainage pipe. If D1 is less than or equal to 0.5 mile, a discharge from the facility could pose substantial harm because the time to travel the distance from the storm drain to the navigable water (D2) is virtually instantaneous.

5.7 A facility's proximity to fish and wildlife and sensitive environments not bordering a navigable water, as depicted as D4 in Figure C-1 of this attachment, must also be considered, regardless of the distance from the facility to navigable waters. Factors to be considered in assessing oil transport over land to fish and wildlife and sensitive environments should include the topography of the surrounding area, drainage patterns, man-made barriers (excluding secondary containment structures), and soil distribution and porosity.

5.8 If a facility is not found to pose substantial harm to fish and wildlife and sensitive environments not bordering navigable waters via oil transport on land, then supporting documentation should be maintained at the facility. However, such documentation should be submitted with the response plan if a facility is found to pose substantial harm.

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⁴ The design velocities were obtained from Howard County, Maryland Department of Public Works' Storm Drainage Design Manual.



Appendix D to Part 112—Determination of a Worst Case Discharge Planning Volume

1.0 Instructions

1.1 An owner or operator is required to complete this worksheet if the facility meets the criteria, as presented in Appendix C to this part, or it is determined by the RA that the facility could cause substantial harm to the environment. The calculation of a worst case discharge planning volume is used for emergency planning purposes, and is required in 40 CFR 112.20 for facility owners or operators who must prepare a response plan. When planning for the amount of resources and equipment necessary to respond to the worst case discharge planning volume, adverse weather conditions must be taken into consideration. An owner or operator is required to determine the facility's worst case discharge planning volume from either Part A of this appendix for an onshore storage facility, or Part B of this appendix for an onshore production facility. The worksheet considers the provision of adequate secondary containment at a facility.

1.2 For onshore storage facilities and production facilities, permanently manifolded oil storage tanks are defined as tanks that are designed, installed, and/or operated in such a manner that the multiple tanks function as one storage unit (i.e., multiple tank volumes are equalized). In a worst case discharge scenario, a single failure could cause the discharge of the contents of more than one tank. The owner or operator must provide evidence in the response plan that tanks with common piping or piping systems are not operated as one unit. If such evidence is provided and is acceptable to the RA, the worst case discharge planning volume would be based on the capacity of the largest oil storage tank within a common secondary containment area or the largest oil storage tank within a single secondary containment area, whichever is greater. For permanently manifolded tanks that function as one oil storage unit, the worst case discharge planning volume would be based on the combined oil storage capacity of all manifolded tanks or the capacity of the largest single oil storage tank within a secondary containment area, whichever is greater. For purposes of this rule, permanently manifolded tanks that are separated by internal divisions for each tank are considered to be single tanks and individual manifolded tank volumes are not combined.

1.3 For production facilities, the presence of exploratory wells, production wells, and oil storage tanks must be considered in the calculation. Part B of this appendix takes these additional factors into consideration and provides steps for their inclusion in the total worst case discharge planning volume. Onshore oil production facilities may include all wells, flowlines, separation equipment, storage facilities, gathering lines, and auxiliary non-transportation-related equipment and facilities in a single geographical oil or gas field operated by a single operator. Although a potential worst case discharge planning volume is calculated

within each section of the worksheet, the final worst case amount depends on the risk parameter that results in the greatest volume.

1.4 Marine transportation-related transfer facilities that contain fixed aboveground onshore structures used for bulk oil storage are jointly regulated by EPA and the U.S. Coast Guard (USCG), and are termed "complexes." Because the USCG also requires response plans from transportation-related facilities to address a worst case discharge of oil, a separate calculation for the worst case discharge planning volume for USCG-related facilities is included in the USCG IFR (see Appendix E to this part, section 10, for availability). All complexes that are jointly regulated by EPA and the USCG must compare both calculations for worst case discharge planning volume derived by using the EPA and USCG methodologies and plan for whichever volume is greater.

PART A: WORST CASE DISCHARGE PLANNING VOLUME CALCULATION FOR ONSHORE STORAGE FACILITIES¹

Part A of this worksheet is to be completed by the owner or operator of an SPCC-regulated facility (excluding oil production facilities) if the facility meets the criteria as presented in Appendix C to this part, or if it is determined by the RA that the facility could cause substantial harm to the environment. If you are the owner or operator of a production facility, please proceed to Part B of this worksheet.

A.1 SINGLE-TANK FACILITIES

For facilities containing only one aboveground oil storage tank, the worst case discharge planning volume equals the capacity of the oil storage tank. If adequate secondary containment (sufficiently large to contain the capacity of the aboveground oil storage tank plus sufficient freeboard to allow for precipitation) exists for the oil storage tank, multiply the capacity of the tank by 0.8.

(1) FINAL WORST CASE VOLUME:

GAL

(2) Do not proceed further.

A.2 SECONDARY CONTAINMENT—MULTIPLE-TANK FACILITIES

Are all aboveground oil storage tanks or groups of aboveground oil storage tanks at the facility without adequate secondary containment?²

(Y/N)

A.2.1 If the answer is yes, the final worst case discharge planning volume equals the total aboveground oil storage capacity at the facility.

(1) FINAL WORST CASE VOLUME:

GAL

(2) Do not proceed further.

A.2.2 If the answer is no, calculate the total aboveground oil storage capacity of tanks without adequate secondary containment. If all aboveground oil storage

¹ "Storage facilities" represent all facilities subject to this part, excluding oil production facilities.

² Secondary containment is defined in 40 CFR 112.7(e)(2). Acceptable methods and structures for containment are also given in 40 CFR 112.7(c)(1).

tanks or groups of aboveground oil storage tanks at the facility have adequate secondary containment, ENTER "0" (zero).

GAL

A.2.3 Calculate the capacity of the largest single aboveground oil storage tank within an adequate secondary containment area or the combined capacity of a group of aboveground oil storage tanks permanently manifolded together, whichever is greater, PLUS THE VOLUME FROM QUESTION A2(b).

FINAL WORST CASE VOLUME:³

GAL

PART B: WORST CASE DISCHARGE PLANNING VOLUME CALCULATION FOR ONSHORE PRODUCTION FACILITIES

Part B of this worksheet is to be completed by the owner or operator of an SPCC-regulated oil production facility if the facility meets the criteria presented in Appendix C to this part, or if it is determined by the RA that the facility could cause substantial harm. A production facility consists of all wells (producing and exploratory) and related equipment in a single geographical oil or gas field operated by a single operator.

B.1 SINGLE-TANK FACILITIES

B.1.1 For facilities containing only one aboveground oil storage tank, the worst case discharge planning volume equals the capacity of the aboveground oil storage tank plus the production volume of the well with the highest output at the facility. If adequate secondary containment (sufficiently large to contain the capacity of the aboveground oil storage tank plus sufficient freeboard to allow for precipitation) exists for the storage tank, multiply the capacity of the tank by 0.8.

B.1.2 For facilities with production wells producing by pumping, if the rate of the well with the highest output is known and the number of days the facility is unattended can be predicted, then the production volume is equal to the pumping rate of the well multiplied by the greatest number of days the facility is unattended.

B.1.3 If the pumping rate of the well with the highest output is estimated or the maximum number of days the facility is unattended is estimated, then the production volume is determined from the pumping rate of the well multiplied by 1.5 times the greatest number of days that the facility has been or is expected to be unattended.

B.1.4 Attachment D-1 to this appendix provides methods for calculating the production volume for exploratory wells and production wells producing under pressure.

(1) FINAL WORST CASE VOLUME:

GAL

(2) Do not proceed further.

B.2 SECONDARY CONTAINMENT—MULTIPLE-TANK FACILITIES

Are all aboveground oil storage tanks or groups of aboveground oil storage tanks at the facility without adequate secondary containment?

³ All complexes that are jointly regulated by EPA and the USCG must also calculate the worst case discharge planning volume for the transportation-related portions of the facility and plan for whichever volume is greater.

(Y/N)

B.2.1 If the answer is yes, the final worst case volume equals the total aboveground oil storage capacity without adequate secondary containment plus the production volume of the well with the highest output at the facility.

(1) For facilities with production wells producing by pumping, if the rate of the well with the highest output is known and the number of days the facility is unattended can be predicted, then the production volume is equal to the pumping rate of the well multiplied by the greatest number of days the facility is unattended.

(2) If the pumping rate of the well with the highest output is estimated or the maximum number of days the facility is unattended is estimated, then the production volume is determined from the pumping rate of the well multiplied by 1.5 times the greatest number of days that the facility has been or is expected to be unattended.

(3) Attachment D-1 to this appendix provides methods for calculating the production volumes for exploratory wells and production wells producing under pressure.

(A) FINAL WORST CASE VOLUME:
GAL

(B) Do not proceed further.

B.2.2 If the answer is no, calculate the total aboveground oil storage capacity of tanks without adequate secondary containment. If all aboveground oil storage tanks or groups of aboveground oil storage tanks at the facility have adequate secondary containment, ENTER "0" (zero).

GAL

B.2.3 Calculate the capacity of the largest single aboveground oil storage tank within an adequate secondary containment area or the combined capacity of a group of aboveground oil storage tanks permanently manifolded together, whichever is greater, plus the production volume of the well with the highest output, PLUS THE VOLUME FROM QUESTION B2(b). Attachment D-1 provides methods for calculating the production volumes for exploratory wells and production wells producing under pressure.

(1) FINAL WORST CASE VOLUME:⁴
GAL

(2) Do not proceed further.

Attachments to Appendix D

Attachment D-1—Methods to Calculate Production Volumes for Production Facilities With Exploratory Wells or Production Wells Producing Under Pressure

1.0 Introduction

The owner or operator of a production facility with exploratory wells or production wells producing under pressure shall compare the well rate of the highest output well (rate of well), in barrels per day, to the ability of response equipment and personnel to recover the volume of oil that could be discharged (rate of recovery), in barrels per

day. The result of this comparison will determine the method used to calculate the production volume for the production facility. This production volume is to be used to calculate the worst case discharge planning volume in Part B of this appendix.

2.0 Description of Methods

2.1 Method A

If the well rate would overwhelm the response efforts (i.e., rate of well/rate of recovery ≥ 1), then the production volume would be the 30-day forecasted well rate for a well 10,000 feet deep or less, or the 45-day forecasted well rate for a well deeper than 10,000 feet.

(1) For wells 10,000 feet deep or less:
Production volume = 30 days \times rate of well.

(2) For wells deeper than 10,000 feet:
Production volume = 45 days \times rate of well.

2.2 Method B

2.2.1 If the rate of recovery would be greater than the well rate (i.e., rate of well/rate of recovery < 1), then the production volume would equal the sum of two terms:
Production volume = discharge volume₁ + discharge volume₂

2.2.2 The first term represents the volume of the oil discharged from the well between the time of the blowout and the time the response resources are on scene and recovering oil (discharge volume₁).

Discharge volume₁ = (days unattended + days to respond) \times (rate of well)

2.2.3 The second term represents the volume of oil discharged from the well after the response resources begin operating until the spill is stopped, adjusted for the recovery rate of the response resources (discharge volume₂).

(1) For wells 10,000 feet deep or less:
Discharge volume₂ = [30 days - (days unattended + days to respond)] \times (rate of well) \times (rate of well/rate of recovery)

(2) For wells deeper than 10,000 feet:
Discharge volume₂ = [45 days - (days unattended + days to respond)] \times (rate of well) \times (rate of well/rate of recovery)

3.0 Example

3.1 A facility consists of two production wells producing under pressure, which are both less than 10,000 feet deep. The well rate of well A is 5 barrels per day, and the well rate of well B is 10 barrels per day. The facility is unattended for a maximum of 7 days. The facility operator estimates that it will take 2 days to have response equipment and personnel on scene and responding to a blowout, and that the projected rate of recovery will be 20 barrels per day.

(1) First, the facility operator determines that the highest output well is well B. The

facility operator calculates the ratio of the rate of well to the rate of recovery:

10 barrels per day/20 barrels per day = 0.5

Because the ratio is less than one, the facility operator will use Method B to calculate the production volume.

(2) The first term of the equation is:

Discharge volume₁ = (7 days + 2 days) \times (10 barrels per day) = 90 barrels

(3) The second term of the equation is:

Discharge volume₂ = [30 days - (7 days + 2 days)] \times (10 barrels per day) \times (0.5) = 105 barrels

(4) Therefore, the production volume is:

Production volume = 90 barrels + 105 barrels = 195 barrels

3.2 If the recovery rate was 5 barrels per day, the ratio of rate of well to rate of recovery would be 2, so the facility operator would use Method A. The production volume would have been:

30 days \times 10 barrels per day = 300 barrels

Appendix E to Part 112—Determination and Evaluation of Required Response Resources for Facility Response Plans

1.0 Purpose and Definitions

1.1 The purpose of this appendix is to describe the procedures to identify response resources to meet the requirements of § 112.20. To identify response resources to meet the facility response plan requirements of 40 CFR 112.20(h), owners or operators shall follow this appendix or, where not appropriate, shall clearly demonstrate in the response plan why use of this appendix is not appropriate at the facility and make comparable arrangements for response resources.

1.2 Definitions.

1.2.1 *Nearshore* is an operating area defined as extending seaward 12 miles from the boundary lines defined in 46 CFR part 7, except in the Gulf of Mexico. In the Gulf of Mexico, it means the area extending 12 miles from the line of demarcation (COLREG lines) defined in 49 CFR 80.740 and 80.850.

1.2.2 *Non-persistent oils or Group 1 oils* include:

(1) A petroleum-based oil that, at the time of shipment, consists of hydrocarbon fractions;

(A) At least 50 percent of which by volume, distill at a temperature of 340 degrees C (645 degrees F); and

(B) At least 95 percent of which by volume, distill at a temperature of 370 degrees C (700 degrees F); and

(2) A non-petroleum oil with a specific gravity less than 0.8.

1.2.3 *Non-petroleum oil* is oil of any kind that is not petroleum-based. It includes, but is not limited to, animal and vegetable oils.

1.2.4 *Ocean* means the nearshore area.

1.2.5 *Operating area* means Rivers and Canals, Inland, Nearshore, and Great Lakes geographic location(s) in which a facility is handling, storing, or transporting oil.

1.2.6 *Operating environment* means Rivers and Canals, Inland, Great Lakes, or Ocean. These terms are used to define the conditions in which response equipment is designed to function.

1.2.7 *Persistent oils* include:

⁴ All complexes that are jointly regulated by EPA and the USCG must also calculate the worst case discharge planning volume for the transportation-related portions of the facility and plan for whichever volume is greater.

(1) A petroleum-based oil that does not meet the distillation criteria for a non-persistent oil. Persistent oils are further classified based on specific gravity as follows:

(A) Group 2—specific gravity less than 0.85;

(B) Group 3—specific gravity equal to or greater than 0.85 and less than 0.95;

(C) Group 4—specific gravity equal to or greater than 0.95 and less than 1.0; or

(D) Group 5—specific gravity equal to or greater than 1.0.

(2) A non-petroleum oil with a specific gravity of 0.8 or greater. These oils are further classified based on specific gravity as follows:

(A) Group 2—specific gravity equal to or greater than 0.8 and less than 0.85;

(B) Group 3—specific gravity equal to or greater than 0.85 and less than 0.95;

(C) Group 4—specific gravity equal to or greater than 0.95 and less than 1.0; or

(D) Group 5—specific gravity equal to or greater than 1.0.

1.2.8 Other definitions are included in § 112.2, section 1.2 of Appendices C and E, and section 3.0 of Appendix F.

2.0 Equipment Operability and Readiness

2.1 All equipment identified in a response plan must be designed to operate in the conditions expected in the facility's geographic area (i.e., operating environment). These conditions vary widely based on location and season. Therefore, it is difficult to identify a single stockpile of response equipment that will function effectively in each geographic location (i.e., operating area).

2.2 Facilities handling, storing, or transporting oil in more than one operating environment as indicated in Table 1 of this appendix must identify equipment capable of successfully functioning in each operating environment.

2.3 When identifying equipment for the response plan (based on the use of this appendix), a facility owner or operator must consider the inherent limitations of the operability of equipment components and response systems. The criteria in Table 1 of this appendix shall be used to evaluate the operability in a given environment. These criteria reflect the general conditions in certain operating environments.

2.3.1 The Regional Administrator may require documentation that the boom identified in a facility response plan meets the criteria in Table 1 of this appendix. Absent acceptable documentation, the Regional Administrator may require that the boom be tested to demonstrate that it meets the criteria in Table 1 of this appendix. Testing must be in accordance with ASTM F 715, ASTM F 989, or other tests approved by EPA as deemed appropriate (see Appendix E to this part, section 10, for general availability of documents).

2.4 Table 1 of this appendix lists criteria for oil recovery devices and boom. All other equipment necessary to sustain or support response operations in an operating environment must be designed to function in the same conditions. For example, boats that deploy or support skimmers or boom must be

capable of being safely operated in the significant wave heights listed for the applicable operating environment.

2.5 A facility owner or operator shall refer to the applicable Area Contingency Plan (ACP), where available, to determine if ice, debris, and weather-related visibility are significant factors to evaluate the operability of equipment. The ACP may also identify the average temperature ranges expected in the facility's operating area. All equipment identified in a response plan must be designed to operate within those conditions or ranges.

2.6 This appendix provides information on response resource mobilization and response times. The distance of the facility from the storage location of the response resources must be used to determine whether the resources can arrive on-scene within the stated time. A facility owner or operator shall include the time for notification, mobilization, and travel of resources identified to meet the medium and Tier 1 worst case discharge requirements identified in section 4.3 of this appendix (for medium discharges) and section 5.3 of this appendix (for worst case discharges). The facility owner or operator must plan for notification and mobilization of Tier 2 and 3 response resources as necessary to meet the requirements for arrival on-scene in accordance with section 5.3 of this appendix. An on-water speed of 5 knots and a land speed of 35 miles per hour is assumed, unless the facility owner or operator can demonstrate otherwise.

2.7 In identifying equipment, the facility owner or operator shall list the storage location, quantity, and manufacturer's make and model. For oil recovery devices, the effective daily recovery capacity, as determined using section 6 of this appendix, must be included. For boom, the overall boom height (draft and freeboard) shall be included. A facility owner or operator is responsible for ensuring that the identified boom has compatible connectors.

3.0 Determining Response Resources Required for Small Discharges

3.1 A facility owner or operator shall identify sufficient response resources available, by contract or other approved means as described in § 112.2, to respond to a small discharge. A small discharge is defined as any discharge volume less than or equal to 2,100 gallons, but not to exceed the calculated worst case discharge. The equipment must be designed to function in the operating environment at the point of expected use.

3.2 Complexes that are regulated by EPA and the USCG must also consider planning quantities for the transportation-related transfer portion of the facility. The USCG planning level that corresponds to EPA's "small discharge" is termed "the average most probable discharge." The USCG revisions to 33 CFR part 154 define "the average most probable discharge" as a discharge of 50 barrels (2,100 gallons). Owners or operators of complexes must compare oil spill volumes for a small discharge and an average most probable discharge and plan for whichever quantity is greater.

3.3 The response resources shall, as appropriate, include:

3.3.1 One thousand feet of containment boom (or, for complexes with marine transfer components, 1,000 feet of containment boom or two times the length of the largest vessel that regularly conducts oil transfers to or from the facility, whichever is greater), and a means of deploying it within 1 hour of the discovery of a spill;

3.3.2 Oil recovery devices with an effective daily recovery capacity equal to the amount of oil discharged in a small discharge or greater which is available at the facility within 2 hours of the detection of an oil discharge; and

3.3.3 Oil storage capacity for recovered oily material indicated in section 9.2 of this appendix.

4.0 Determining Response Resources Required for Medium Discharges

4.1 A facility owner or operator shall identify sufficient response resources available, by contract or other approved means as described in § 112.2, to respond to a medium discharge of oil for that facility. This will require response resources capable of containing and collecting up to 36,000 gallons of oil or 10 percent of the worst case discharge, whichever is less. All equipment identified must be designed to operate in the applicable operating environment specified in Table 1 of this appendix.

4.2 Complexes that are regulated by EPA and the USCG must also consider planning quantities for the transportation-related transfer portion of the facility. The USCG planning level that corresponds to EPA's "medium discharge" is termed "the maximum most probable discharge." The USCG revisions to 33 CFR part 154 define "the maximum most probable discharge" as a discharge of 1,200 barrels (50,400 gallons) or 10 percent of the worst case discharge, whichever is less. Owners or operators of complexes must compare spill volumes for a medium discharge and a maximum most probable discharge and plan for whichever quantity is greater.

4.3 Oil recovery devices identified to meet the applicable medium discharge volume planning criteria must be located such that they are capable of arriving on-scene within 6 hours in higher volume port areas and the Great Lakes and within 12 hours in all other areas. Higher volume port areas and Great Lakes areas are defined in section 1.2 of Appendix C to this part.

4.4 Because rapid control, containment, and removal of oil are critical to reduce spill impact, the owner or operator must determine response resources using an effective daily recovery capacity for oil recovery devices equal to 50 percent of the planning volume applicable for the facility as determined in section 4.1 of this appendix. The effective daily recovery capacity for oil recovery devices identified in the plan must be determined using the criteria in section 6 of this appendix.

4.5 In addition to oil recovery capacity, the plan shall, as appropriate, identify sufficient quantity of containment boom available, by contract or other approved means as described in § 112.2, to arrive

within the required response times for oil collection and containment and for protection of fish and wildlife and sensitive environments. For further description of fish and wildlife and sensitive environments, see Appendices I, II, and III to DOC/NOAA's "Guidance for Facility and Vessel Response Plans: Fish and Wildlife and Sensitive Environments" (see Appendix E to this part, section 10, for availability) and the applicable ACP. While the regulation does not set required quantities of boom for oil collection and containment, the response plan shall identify and ensure, by contract or other approved means as described in § 112.2, the availability of the quantity of boom identified in the plan for this purpose.

4.6 The plan must indicate the availability of temporary storage capacity to meet section 9.2 of this appendix. If available storage capacity is insufficient to meet this level, then the effective daily recovery capacity must be derated (downgraded) to the limits of the available storage capacity.

4.7 The following is an example of a medium discharge volume planning calculation for equipment identification in a higher volume port area: The facility's largest aboveground storage tank volume is 840,000 gallons. Ten percent of this capacity is 84,000 gallons. Because 10 percent of the facility's largest tank, or 84,000 gallons, is greater than 36,000 gallons, 36,000 gallons is used as the planning volume. The effective daily recovery capacity is 50 percent of the planning volume, or 18,000 gallons per day. The ability of oil recovery devices to meet this capacity must be calculated using the procedures in section 6 of this appendix. Temporary storage capacity available on-scene must equal twice the daily recovery capacity as indicated in section 9.2 of this appendix, or 36,000 gallons per day. This is the information the facility owner or operator must use to identify and ensure the availability of the required response resources, by contract or other approved means as described in § 112.2. The facility owner shall also identify how much boom is available for use.

5.0 Determining Response Resources Required for the Worst Case Discharge to the Maximum Extent Practicable

5.1 A facility owner or operator shall identify and ensure the availability of, by contract or other approved means as described in § 112.2, sufficient response resources to respond to the worst case discharge of oil to the maximum extent practicable. Section 7 of this appendix describes the method to determine the necessary response resources. A worksheet is provided as Attachment E-1 at the end of this appendix to simplify the procedures involved in calculating the planning volume for response resources for the worst case discharge.

5.2 Complexes that are regulated by EPA and the USCG must also consider planning for the worst case discharge at the transportation-related portion of the facility. The USCG requires that transportation-related facility owners or operators use a different calculation for the worst case discharge in the revisions to 33 CFR part 154.

Owners or operators of complex facilities that are regulated by EPA and the USCG must compare both calculations of worst case discharge derived by EPA and the USCG and plan for whichever volume is greater.

5.3 Oil spill response resources identified in the response plan and available, by contract or other approved means as described in § 112.2, to meet the applicable worst case discharge planning volume must be located such that they are capable of arriving at the scene of a discharge within the times specified for the applicable response tier listed below:

	Tier 1	Tier 2	Tier 3
Higher volume port areas.	6 hrs	30 hrs	54 hrs
Great Lakes.	12 hrs	36 hrs	60 hrs
All other river and canal, inland, and near-shore areas.	12 hrs	36 hrs	60 hrs

The three levels of response tiers apply to the amount of time in which facility owners or operators must plan for response resources to arrive at the scene of a spill to respond to the worst case discharge planning volume. For example, at a worst case discharge in an inland area, the first tier of response resources (i.e., that amount of on-water and shoreline cleanup capacity necessary to respond to the fraction of the worst case discharge as indicated through the series of steps described in sections 7.2 and 7.3 of this appendix) would arrive at the scene of the discharge within 12 hours; the second tier of response resources would arrive within 36 hours; and the third tier of response resources would arrive within 60 hours.

5.4 The effective daily recovery capacity for oil recovery devices identified in the response plan must be determined using the criteria in section 6 of this appendix. A facility owner or operator shall identify the storage locations of all response resources used for each tier. The owner or operator of a facility whose required daily recovery capacity exceeds the applicable contracting caps in Table 5 of this appendix shall, as appropriate, identify sources of additional equipment, their location, and the arrangements made to obtain this equipment during a response. The owner or operator of a facility whose calculated planning volume exceeds the applicable contracting caps in Table 5 of this appendix shall, as appropriate, identify sources of additional equipment equal to twice the cap listed in Tier 3 or the amount necessary to reach the calculated planning volume, whichever is lower. The resources identified above the cap shall be capable of arriving on-scene not later than the Tier 3 response times in section 5.3

of this appendix. No contract is required. While general listings of available response equipment may be used to identify additional sources (i.e., "public" resources vs. "private" resources), the response plan shall identify the specific sources, locations, and quantities of equipment that a facility owner or operator has considered in his or her planning. When listing USCG-classified oil spill removal organization(s) that have sufficient removal capacity to recover the volume above the response capacity cap for the specific facility, as specified in Table 5 of this appendix, it is not necessary to list specific quantities of equipment.

5.5 A facility owner or operator shall identify the availability of temporary storage capacity to meet section 9.2 of this appendix. If available storage capacity is insufficient, then the effective daily recovery capacity must be derated (downgraded) to the limits of the available storage capacity.

5.6 When selecting response resources necessary to meet the response plan requirements, the facility owner or operator shall, as appropriate, ensure that a portion of those resources is capable of being used in close-to-shore response activities in shallow water. For any EPA-regulated facility that is required to plan for response in shallow water, at least 20 percent of the on-water response equipment identified for the applicable operating area shall, as appropriate, be capable of operating in water of 6 feet or less depth.

5.7 In addition to oil spill recovery devices, a facility owner or operator shall identify sufficient quantities of boom that are available, by contract or other approved means as described in § 112.2, to arrive on-scene within the specified response times for oil containment and collection. The specific quantity of boom required for collection and containment will depend on the facility-specific information and response strategies employed. A facility owner or operator shall, as appropriate, also identify sufficient quantities of oil containment boom to protect fish and wildlife and sensitive environments. For further description of fish and wildlife and sensitive environments, see Appendices I, II, and III to DOC/NOAA's "Guidance for Facility and Vessel Response Plans: Fish and Wildlife and Sensitive Environments" (see Appendix E to this part, section 10, for availability), and the applicable ACP. Refer to this guidance document for the number of days and geographic areas (i.e., operating environments) specified in Table 2 of this appendix.

5.8 A facility owner or operator shall also identify, by contract or other approved means as described in § 112.2, the availability of an oil spill removal organization(s) (as described in § 112.2) capable of responding to a shoreline cleanup operation involving the calculated volume of oil and emulsified oil that might impact the affected shoreline. The volume of oil that shall, as appropriate, be planned for is calculated through the application of factors contained in Tables 2 and 3 of this appendix. The volume calculated from these tables is intended to assist the facility owner or operator to identify an oil spill removal organization with sufficient resources and expertise.

6.0 Determining Effective Daily Recovery Capacity for Oil Recovery Devices

6.1 Oil recovery devices identified by a facility owner or operator must be identified by the manufacturer, model, and effective daily recovery capacity. These capacities must be used to determine whether there is sufficient capacity to meet the applicable planning criteria for a small discharge, a medium discharge, and a worst case discharge to the maximum extent practicable.

6.2 To determine the effective daily recovery capacity of oil recovery devices, the formula listed in section 6.2.1 of this appendix shall be used. This formula considers potential limitations due to available daylight, weather, sea state, and percentage of emulsified oil in the recovered material. The RA may assign a lower efficiency factor to equipment listed in a response plan if it is determined that such a reduction is warranted.

6.2.1 The following formula shall be used to calculate the effective daily recovery capacity:

$$R = T \times 24 \text{ hours} \times E$$

where:

R—Effective daily recovery capacity;

T—Throughput rate in barrels per hour (nameplate capacity); and

E—20 percent efficiency factor (or lower factor as determined by the Regional Administrator).

6.2.2 For those devices in which the pump limits the throughput of liquid, throughput rate shall be calculated using the pump capacity.

6.2.3 For belt or mop type devices, the throughput rate shall be calculated using the speed of the belt or mop through the device, assumed thickness of oil adhering to or collected by the device, and surface area of the belt or mop. For purposes of this calculation, the assumed thickness of oil will be 1/4 inch.

6.2.4 Facility owners or operators that include oil recovery devices whose throughput is not measurable using a pump capacity or belt/mop speed may provide information to support an alternative method of calculation. This information must be submitted following the procedures in section 6.3.2 of this appendix.

6.3 As an alternative to section 6.2 of this appendix, a facility owner or operator may submit adequate evidence that a different effective daily recovery capacity should be applied for a specific oil recovery device. Adequate evidence is actual verified performance data in spill conditions or tests using American Society of Testing and Materials (ASTM) Standard F 631-80, F 808-83 (1988), or an equivalent test approved by EPA as deemed appropriate (see Appendix E to this part, section 10, for general availability of documents).

6.3.1 The following formula must be used to calculate the effective daily recovery capacity under this alternative:

$$R = D \times U$$

where:

R—Effective daily recovery capacity;

D—Average Oil Recovery Rate in barrels per hour (Item 26 in F 808-83; Item 13.1.15 in F 631-80; or actual performance data); and

U—Hours per day that equipment can operate under spill conditions. Ten hours per day must be used unless a facility owner or operator can demonstrate that the recovery operation can be sustained for longer periods.

6.3.2 A facility owner or operator submitting a response plan shall provide data that supports the effective daily recovery capacities for the oil recovery devices listed. The following is an example of these calculations:

(1) A weir skimmer identified in a response plan has a manufacturer's rated throughput at the pump of 267 gallons per minute (gpm).
267 gpm=381 barrels per hour (bph)
 $R=381 \text{ bph} \times 24 \text{ hr/day} \times 0.2=1,829 \text{ barrels per day}$

(2) After testing using ASTM procedures, the skimmer's oil recovery rate is determined to be 220 gpm. The facility owner or operator identifies sufficient resources available to support operations for 12 hours per day.

220 gpm=314 bph
 $R=314 \text{ bph} \times 12 \text{ hr/day}=3,768 \text{ barrels per day}$

(3) The facility owner or operator will be able to use the higher capacity if sufficient temporary oil storage capacity is available. Determination of alternative efficiency factors under section 6.2 of this appendix or the acceptability of an alternative effective daily recovery capacity under section 6.3 of this appendix will be made by the Regional Administrator as deemed appropriate.

7.0 Calculating Planning Volumes for a Worst Case Discharge

7.1 A facility owner or operator shall plan for a response to the facility's worst case discharge. The planning for on-water oil recovery must take into account a loss of some oil to the environment due to evaporative and natural dissipation, potential increases in volume due to emulsification, and the potential for deposition of oil on the shoreline. The procedures for non-petroleum oils are discussed in section 7.7 of this appendix.

7.2 The following procedures must be used by a facility owner or operator in determining the required on-water oil recovery capacity:

7.2.1 The following must be determined: the worst case discharge volume of oil in the facility; the appropriate group(s) for the types of oil handled, stored, or transported at the facility [persistent (Groups 2, 3, 4, 5) or non-persistent (Group 1)]; and the facility's specific operating area. See sections 1.2.2 and 1.2.7 of this appendix for the definitions of non-persistent and persistent oils, respectively. Facilities that handle, store, or transport oil from different oil groups must calculate each group separately, unless the oil group constitutes 10 percent or less by volume of the facility's total oil storage capacity. This information is to be used with Table 2 of this appendix to determine the percentages of the total volume to be used for removal capacity planning. Table 2 of this appendix divides the volume into three

categories: oil lost to the environment; oil deposited on the shoreline; and oil available for on-water recovery.

7.2.2 The on-water oil recovery volume shall, as appropriate, be adjusted using the appropriate emulsification factor found in Table 3 of this appendix. Facilities that handle, store, or transport oil from different petroleum groups must compare the on-water recovery volume for each oil group (unless the oil group constitutes 10 percent or less by volume of the facility's total storage capacity) and use the calculation that results in the largest on-water oil recovery volume to plan for the amount of response resources for a worst case discharge.

7.2.3 The adjusted volume is multiplied by the on-water oil recovery resource mobilization factor found in Table 4 of this appendix from the appropriate operating area and response tier to determine the total on-water oil recovery capacity in barrels per day that must be identified or contracted to arrive on-scene within the applicable time for each response tier. Three tiers are specified. For higher volume port areas, the contracted tiers of resources must be located such that they are capable of arriving on-scene within 6 hours for Tier 1, 30 hours for Tier 2, and 54 hours for Tier 3 of the discovery of an oil discharge. For all other rivers and canals, inland, nearshore areas, and the Great Lakes, these tiers are 12, 36, and 60 hours.

7.2.4 The resulting on-water oil recovery capacity in barrels per day for each tier is used to identify response resources necessary to sustain operations in the applicable operating area. The equipment shall be capable of sustaining operations for the time period specified in Table 2 of this appendix. The facility owner or operator shall identify and ensure the availability, by contract or other approved means as described in § 112.2, of sufficient oil spill recovery devices to provide the effective daily oil recovery capacity required. If the required capacity exceeds the applicable cap specified in Table 5 of this appendix, then a facility owner or operator shall ensure, by contract or other approved means as described in § 112.2, only for the quantity of resources required to meet the cap, but shall identify sources of additional resources as indicated in section 5.4 of this appendix. The owner or operator of a facility whose planning volume exceeded the cap in 1993 must make arrangements to identify and ensure the availability, by contract or other approved means as described in § 112.2, for additional capacity to be under contract by 1998 or 2003, as appropriate. For a facility that handles multiple groups of oil, the required effective daily recovery capacity for each oil group is calculated before applying the cap. The oil group calculation resulting in the largest on-water recovery volume must be used to plan for the amount of response resources for a worst case discharge, unless the oil group comprises 10 percent or less by volume of the facility's total oil storage capacity.

7.3 The procedures discussed in sections 7.3.1-7.3.3 of this appendix must be used to calculate the planning volume for identifying shoreline cleanup capacity (for Groups 1 through Group 4 oils).

7.3.1 The following must be determined: the worst case discharge volume of oil for the facility; the appropriate group(s) for the types of oil handled, stored, or transported at the facility (persistent (Groups 2, 3, or 4) or non-persistent (Group 1)); and the geographic area(s) in which the facility operates (i.e., operating areas). For a facility handling, storing, or transporting oil from different groups, each group must be calculated separately. Using this information, Table 2 of this appendix must be used to determine the percentages of the total volume to be used for shoreline cleanup resource planning.

7.3.2 The shoreline cleanup planning volume must be adjusted to reflect an emulsification factor using the same procedure as described in section 7.2.2 of this appendix.

7.3.3 The resulting volume shall be used to identify an oil spill removal organization with the appropriate shoreline cleanup capability.

7.4 A response plan must identify response resources with fire fighting capability. The owner or operator of a facility for a facility that handles, stores, or transports Group 1 through Group 4 oils that does not have adequate fire fighting resources located at the facility or that cannot rely on sufficient local fire fighting resources must identify adequate fire fighting resources. It is recommended that the facility owner or operator ensure, by contract or other approved means as described in § 112.2, the availability of these resources. The response plan must also identify an individual located at the facility to work with the fire department for Group 1 through Group 4 oil fires. This individual shall also verify that sufficient well-trained fire fighting resources are available within a reasonable response time to a worst case scenario. The individual may be the qualified individual identified in the response plan or another appropriate individual located at the facility.

7.5 The following is an example of the procedure described above in sections 7.2 and 7.3 of this appendix: A facility with a 270,000 barrel (11.3 million gallons) capacity for #6 oil (specific gravity 0.96) is located in a higher volume port area. The facility is on a peninsula and has docks on both the ocean and bay sides. The facility has four aboveground oil storage tanks with a combined total capacity of 80,000 barrels (3.36 million gallons) and no secondary containment. The remaining facility tanks are inside secondary containment structures. The largest aboveground oil storage tank (90,000 barrels or 3.78 million gallons) has its own secondary containment. Two 50,000 barrel (2.1 million gallon) tanks (that are not connected by a manifold) are within a common secondary containment tank area, which is capable of holding 100,000 barrels (4.2 million gallons) plus sufficient freeboard.

7.5.1 The worst case discharge for the facility is calculated by adding the capacity of all aboveground oil storage tanks without secondary containment (80,000 barrels) plus the capacity of the largest aboveground oil storage tank inside secondary containment. The resulting worst case discharge volume is 170,000 barrels or 7.14 million gallons.

7.5.2 Because the requirements for Tiers 1, 2, and 3 for inland and nearshore exceed the caps identified in Table 5 of this appendix, the facility owner will contract for a response to 10,000 barrels per day (bpd) for Tier 1, 20,000 bpd for Tier 2, and 40,000 bpd for Tier 3. Resources for the remaining 7,850 bpd for Tier 1, 9,750 bpd for Tier 2, and 7,600 bpd for Tier 3 shall be identified but need not be contracted for in advance. The facility owner or operator shall, as appropriate, also identify or contract for quantities of boom identified in their response plan for the protection of fish and wildlife and sensitive environments within the area potentially impacted by a worst case discharge from the facility. For further description of fish and wildlife and sensitive environments, see Appendices I, II, and III to DOD/NOAA's "Guidance for Facility and Vessel Response Plans: Fish and Wildlife and Sensitive Environments," (see Appendix E to this part, section 10, for availability) and the applicable ACP. Attachment C-III to Appendix C provides a method for calculating a planning distance to fish and wildlife and sensitive environments and public drinking water intakes that may be impacted in the event of a worst case discharge.

7.6 The procedures discussed in sections 7.6.1—7.6.3 of this appendix must be used to determine appropriate response resources for facilities with Group 5 oils.

7.6.1 The owner or operator of a facility that handles, stores, or transports Group 5 oils shall, as appropriate, identify the response resources available by contract or other approved means, as described in § 112.2. The equipment identified in a response plan shall, as appropriate, include:

- (1) Sonar, sampling equipment, or other methods for locating the oil on the bottom or suspended in the water column;
- (2) Containment boom, sorbent boom, silt curtains, or other methods for containing the oil that may remain floating on the surface or to reduce spreading on the bottom;
- (3) Dredges, pumps, or other equipment necessary to recover oil from the bottom and shoreline;
- (4) Equipment necessary to assess the impact of such discharges; and
- (5) Other appropriate equipment necessary to respond to a discharge involving the type of oil handled, stored, or transported.

7.6.2 Response resources identified in a response plan for a facility that handles, stores, or transports Group 5 oils under section 7.6.1 of this appendix shall be capable of being deployed (on site) within 24 hours of discovery of a discharge to the area where the facility is operating.

7.6.3 A response plan must identify response resources with fire fighting capability. The owner or operator of a facility that handles, stores, or transports Group 5 oils that does not have adequate fire fighting resources located at the facility or that cannot rely on sufficient local fire fighting resources must identify adequate fire fighting resources. It is recommended that the owner or operator ensure, by contract or other approved means as described in § 112.2, the availability of these resources. The response plan shall also identify an individual located

at the facility to work with the fire department for Group 5 oil fires. This individual shall also verify that sufficient well-trained fire fighting resources are available within a reasonable response time to respond to a worst case discharge. The individual may be the qualified individual identified in the response plan or another appropriate individual located at the facility.

7.7 The procedures described in sections 7.7.1—7.7.5 of this appendix must be used to determine appropriate response plan development and evaluation criteria for facilities that handle, store, or transport non-petroleum oils. Refer to section 8 of this appendix for information on the limitations on the use of dispersants for inland and nearshore areas.

7.7.1 An owner or operator of a facility that handles, stores, or transports non-petroleum oil must provide information in his or her plan that identifies:

- (1) Procedures and strategies for responding to a worst case discharge of non-petroleum oils to the maximum extent practicable; and
- (2) Sources of the equipment and supplies necessary to locate, recover, and mitigate such a discharge.

7.7.2 An owner or operator of a facility that handles, stores, or transports non-petroleum oil must ensure that any equipment identified in a response plan is capable of operating in the conditions expected in the geographic area(s) (i.e., operating environments) in which the facility operates using the criteria in Table 1 of this appendix. When evaluating the operability of equipment, the facility owner or operator must consider limitations that are identified in the appropriate ACPs, including:

- (1) Ice conditions;
- (2) Debris;
- (3) Temperature ranges; and
- (4) Weather-related visibility.

7.7.3 The owner or operator of a facility that handles, stores, or transports non-petroleum oil must identify the response resources that are available by contract or other approved means, as described in § 112.2. The equipment described in the response plan shall, as appropriate, include:

- (1) Containment boom, sorbent boom, or other methods for containing oil floating on the surface or to protect shorelines from impact;
- (2) Oil recovery devices appropriate for the type of non-petroleum oil carried; and
- (3) Other appropriate equipment necessary to respond to a discharge involving the type of oil carried.

7.7.4 Response resources identified in a response plan according to section 7.7.3 of this appendix must be capable of commencing an effective on-scene response within the applicable tier response times in section 5.3 of this appendix.

7.7.5 A response plan must identify response resources with fire fighting capability. The owner or operator of a facility that handles, stores, or transports non-petroleum oils that does not have adequate fire fighting resources located at the facility or that cannot rely on sufficient local fire fighting resources must identify adequate fire fighting resources. It is recommended that

the owner or operator ensure, by contract or other approved means as described in § 112.2, the availability of these resources. The response plan must also identify an individual located at the facility to work with the fire department for non-petroleum fires. This individual shall also verify that sufficient well-trained fire fighting resources are available within a reasonable response time to a worst case scenario. The individual may be the qualified individual identified in the response plan or another appropriate individual located at the facility.

8.0 Determining the Availability of Alternative Response Methods

8.1 For dispersants to be identified in a response plan, they must be on the NCP Product Schedule that is maintained by EPA. (Some States have a list of approved dispersants for use within State waters. These State-approved dispersants are listed on the NCP Product Schedule.)

8.2 Identification of dispersant application in the plan does not imply that the use of this technique will be authorized. Actual authorization for use during a spill response will be governed by the provisions of the NCP and the applicable ACP. To date, dispersant application has not been approved by ACPs for inland areas or shallow nearshore areas.

9.0 Additional Equipment Necessary to Sustain Response Operations

9.1 A facility owner or operator shall, as appropriate, ensure that sufficient numbers of trained personnel and boats, aerial spotting aircraft, containment boom, sorbent materials, boom anchoring materials, and other supplies are available to sustain response operations to completion. All such

equipment must be suitable for use with the primary equipment identified in the response plan. A facility owner or operator is not required to list these resources, but shall certify their availability.

9.2 A facility owner or operator shall evaluate the availability of adequate temporary storage capacity to sustain the effective daily recovery capacities from equipment identified in the plan. Because of the inefficiencies of oil spill recovery devices, response plans must identify daily storage capacity equivalent to twice the effective daily recovery capacity required on-scene. This temporary storage capacity may be reduced if a facility owner or operator can demonstrate by waste stream analysis that the efficiencies of the oil recovery devices, ability to decant waste, or the availability of alternative temporary storage or disposal locations will reduce the overall volume of oily material storage requirement.

9.3 A facility owner or operator shall ensure that his or her planning includes the capability to arrange for disposal of recovered oil products. Specific disposal procedures will be addressed in the applicable ACP.

10.0 References and Availability

10.1 All materials listed in this section are part of EPA's rulemaking docket, and are located in the Superfund Docket, Room M2615, at the U.S. Environmental Protection Agency, 401 M Street, SW., Washington, DC 20460 (Docket Number SPCC-2P). The docket is available for inspection between 9:00 a.m. and 4:00 p.m., Monday through Friday, excluding Federal holidays. Appointments to review the docket can be made by calling 202-260-3046. The public may copy a maximum of 266 pages from any regulatory docket at no cost. If the number of

pages copied exceeds 266, however, a charge of 15 cents will be incurred for each additional page, plus a \$25.00 administrative fee. Charges for copies and docket hours are subject to change.

10.2 The docket will mail copies of materials to requestors who are outside the Washington D.C. metro area. Materials may be available from other sources, as noted in this section. The ERNS/SPCC Information line at 202-260-2342 or the RCRA/Superfund Hotline at 800-424-9346 may also provide additional information on where to obtain documents. To contact the RCRA/Superfund Hotline in the Washington, DC metropolitan area, dial 703-412-9810. The Telecommunications Device for the Deaf (TDD) Hotline number is 800-553-7672, or, in the Washington, DC metropolitan area, 703-412-3323.

10.3 Documents Referenced

(1) National Preparedness for Response Exercise Program (PREP). The PREP draft guidelines are available from United States Coast Guard Headquarters (G-MEP-4), 2100 Second Street, SW., Washington, DC 20593. (See 58 FR 53990, October 19, 1993, Notice of Availability of PREP Guidelines).

(2) "Guidance for Facility and Vessel Response Plans: Fish and Wildlife and Sensitive Environments" (published in the *Federal Register* by DOC/NOAA at 59 FR 14713, March 29, 1994). The guidance is available in the Superfund Docket (see sections 10.1 and 10.2 of this appendix).

(3) ASTM Standards. ASTM F 715, ASTM F 989, ASTM F 631-80, ASTM F 808-83 (1988). The ASTM standards are available from the American Society for Testing and Materials, 1916 Race Street, Philadelphia, PA 19103-1187.

TABLE 1 TO APPENDIX E—RESPONSE RESOURCE OPERATING CRITERIA

Oil Recovery Devices				
Operating environment		Significant wave height ¹		Sea state
Rivers and Canals		≤ 1 foot		1
Inland		≤ 3 feet		2
Great Lakes		≤ 4 feet		2-3
Ocean		≤ 6 feet		3-4

Boom				
Boom property	Use			
	Rivers and canals	Inland	Great Lakes	Ocean
Significant Wave Height ¹	≤ 1	≤ 3	≤ 4	≤ 6
Sea State	1	2	2-3	3-4
Boom height—feet (draft plus freeboard)	6-18	18-42	18-42	≥ 42
Reserve Buoyancy to Weight Ratio	2:1	2:1	2:1	3:1 to 4:1
Total Tensile Strength—pounds	4,500	15,000-20,000	15,000-20,000	≥ 20,000
Skirt Fabric Tensile Strength—pounds	200	300	300	500
Skirt Fabric Tear Strength—pounds	100	100	100	125

¹ Oil recovery devices and boom shall be at least capable of operating in wave heights up to and including the values listed in Table 1 for each operating environment.

TABLE 2 TO APPENDIX E—REMOVAL CAPACITY PLANNING TABLE

Spill location Sustainability of on-water oil recovery Oil group ¹	Rivers and canals			Nearshore/inland Great Lakes		
	3 days			4 days		
	Percent natural dissipation	Percent recovered floating oil	Percent oil onshore	Percent natural dissipation	Percent recovered floating oil	Percent oil Onshore
1. Non-persistent oils	80	10	10	80	20	10
2. Light crudes	40	15	45	50	50	30
3. Medium crudes and fuels	20	15	65	30	50	50
4. Heavy crudes and fuels	5	20	75	10	50	70

Group 5 oils are defined in section 1.2.7 of this appendix; the response resource considerations are outlined in section 7.6 of this appendix.

¹ Non-petroleum oils are defined in section 1.2.3 of this appendix; the response resource considerations are outlined in section 7.7 of this appendix.

TABLE 3 TO APPENDIX E—EMULSIFICATION FACTORS FOR PETROLEUM OIL GROUPS¹

Non-Persistent Oil:	
Group 1	1.0
Persistent Oil:	
Group 2	1.8
Group 3	2.0
Group 4	1.4

TABLE 3 TO APPENDIX E—EMULSIFICATION FACTORS FOR PETROLEUM OIL GROUPS¹—Continued

Group 5 oils are defined in section 1.2.7 of this appendix; the response resource considerations are outlined in section 7.6 of this appendix.
¹ See sections 1.2.2 and 1.2.7 of this appendix for group designations for non-persistent and persistent oils, respectively.

TABLE 4 TO APPENDIX E—ON-WATER OIL RECOVERY RESOURCE MOBILIZATION FACTORS

Operating area	Tier 1	Tier 2	Tier 3
Rivers and Canals			
Inland/Nearshore Great Lakes ...	0.30	0.40	0.60
	0.15	0.25	0.40

Note: These mobilization factors are for total resources mobilized, not incremental response resources.

TABLE 5 TO APPENDIX E—RESPONSE CAPABILITY CAPS BY OPERATING AREA

	Tier 1	Tier 2	Tier 3
February 18, 1993:			
All except Rivers & Canals, Great Lakes	10K bbls/day	20K bbls/day	40K bbls/day.
Great Lakes	5K bbls/day	10K bbls/day	20K bbls/day.
Rivers & Canals	1.5K bbls/day	3.0K bbls/day	6.0K bbls/day.
February 18, 1998:			
All except Rivers & Canals, Great Lakes	12.5K bbls/day	25K bbls/day	50K bbls/day.
Great Lakes	6.35K bbls/day	12.3K bbls/day	25K bbls/day.
Rivers & Canals	1.875K bbls/day	3.75K bbls/day	7.5K bbls/day.
February 18, 2003:			
All except Rivers & Canals, Great Lakes	TBD	TBD	TBD.
Great Lakes	TBD	TBD	TBD.
Rivers & Canals	TBD	TBD	TBD.

Note: The caps show cumulative overall effective daily recovery capacity, not incremental increases.
TBD=To Be Determined.

Attachments to Appendix E

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**ATTACHMENT E-1 --
WORKSHEET TO PLAN VOLUME OF RESPONSE RESOURCES
FOR WORST CASE DISCHARGE**

Part I Background Information

Step (A) Calculate Worst Case Discharge in Barrels (Appendix D)

(A)

Step (B) Oil Group¹ (Table 3 and section 1.2 of this appendix)

Step (C) Operating Area (choose one)

☐Nearshore/Inland
Great Lakes☐or Rivers
and Canals

Step (D) Percentages of Oil (Table 2 of this appendix)

Percent Lost to
Natural Dissipation

(D1)

Percent Recovered
Floating Oil

(D2)

Percent
Oil Onshore

(D3)

Step (E1) On-Water Oil Recovery $\frac{\text{Step (D2)} \times \text{Step (A)}}{100}$

(E1)

Step (E2) Shoreline Recovery $\frac{\text{Step (D3)} \times \text{Step (A)}}{100}$. .

(E2)

Step (F) Emulsification Factor
(Table 3 of this appendix)

(F)

Step (G) On-Water Oil Recovery Resource Mobilization Factor
(Table 4 of this appendix)

Tier 1

(G1)

Tier 2

(G2)

Tier 3

(G3)

¹ A facility that handles, stores, or transports multiple groups of oil must do separate calculations for each oil group on site except for those oil groups that constitute 10 percent or less by volume of the total oil storage capacity at the facility. For purposes of this calculation, the volumes of all products in an oil group must be summed to determine the percentage of the facility's total oil storage capacity.

**ATTACHMENT E-1 (CONTINUED) --
WORKSHEET TO PLAN VOLUME OF RESPONSE RESOURCES
FOR WORST CASE DISCHARGE**

Part II On-Water Oil Recovery Capacity (barrels/day)

Tier 1

Step (E1) x Step (F) x
Step (G1)

Tier 2

Step (E1) x Step (F) x
Step (G2)

Tier 3

Step (E1) x Step (F) x
Step (G3)

Part III Shoreline Cleanup Volume (barrels)

Step (E2) x Step (F)

**Part IV On-Water Response Capacity By Operating Area
(Table 5 of this appendix)
(Amount needed to be contracted for in barrels/day)**

Tier 1

(J1)

Tier 2

(J2)

Tier 3

(J3)

Part V On-Water Amount Needed to be Identified, but not Contracted for in Advance (barrels/day)

Tier 1

Tier 2

Tier 3

Part II Tier 1 - Step (J1)

Part II Tier 2 - Step (J2)

Part II Tier 3 - Step (J3)

NOTE: To convert from barrels/day to gallons/day, multiply the quantities in Parts II through V by 42 gallons/barrel.

**ATTACHMENT E-1 EXAMPLE --
WORKSHEET TO PLAN VOLUME OF RESPONSE RESOURCES
FOR WORST CASE DISCHARGE**

Part I Background Information

Step (A) Calculate Worst Case Discharge in barrels (Appendix D) 170,000

(A)

Step (B) Oil Group¹ (Table 3 and section 1.2 of this appendix) 4

Step (C) Operating Area (choose one) X Nearshore/Inland or Rivers and Canals
Great Lakes

Step (D) Percentages of Oil (Table 2 of this appendix)

Percent Lost to
Natural Dissipation

10

(D1)

Percent Recovered
Floating Oil

50

(D2)

Percent Oil
Onshore

70

(D3)

Step (E1) On-Water Oil Recovery $\frac{\text{Step (D2)} \times \text{Step (A)}}{100}$ 85,000

100

(E1)

Step (E2) Shoreline Recovery $\frac{\text{Step (D3)} \times \text{Step (A)}}{100}$ 119,000

100

(E2)

Step (F) Emulsification Factor
(Table 3 of this appendix) 1.4

(F)

Step (G) On-Water Oil Recovery Resource Mobilization Factor
(Table 4 of this appendix)

Tier 1

0.15

(G1)

Tier 2

0.25

(G2)

Tier 3

0.40

(G3)

¹ A facility that handles, stores, or transports multiple groups of oil must do separate calculations for each oil group on site except for those oil groups that constitute 10 percent or less by volume of the total oil storage capacity at the facility. For purposes of this calculation, the volumes of all products in an oil group must be summed to determine the percentage of the facility's total oil storage capacity.

**ATTACHMENT E-1 EXAMPLE (CONTINUED) --
WORKSHEET TO PLAN VOLUME OF RESPONSE RESOURCES
FOR WORST CASE DISCHARGE**

Part II On-Water Oil Recovery Capacity (barrels/day)

Tier 1	Tier 2	Tier 3
17,850	29,750	47,600
Step (E1) x Step (F) x Step (G1)	Step (E1) x Step (F) x Step (G2)	Step (E1) x Step (F) x Step (G3)

Part III Shoreline Cleanup Volume (barrels) 166,600
Step (E2) x Step (F)

**Part IV On-Water Response Capacity By Operating Area
(Table 5 of this appendix)
(Amount needed to be contracted for in barrels/day)**

Tier 1	Tier 2	Tier 3
10,000	20,000	40,000
(J1)	(J2)	(J3)

Part V On-Water Amount Needed to be Identified, but not Contracted for in Advance (barrels/day)

Tier 1	Tier 2	Tier 3
7,850	9,750	7,600
Part II Tier 1 - Step (J1)	Part II Tier 2 - Step (J2)	Part II Tier 3 - Step (J3)

NOTE: To convert from barrels/day to gallons/day, multiply the quantities in Parts II through V by 42 gallons/barrel.

Appendix F To Part 112—Facility-Specific Response Plan

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 - 1.8.1 Facility Self-Inspection
 - 1.8.1.1 Tank Inspection
 - 1.8.1.2 Response Equipment Inspection
 - 1.8.1.3 Secondary Containment Inspection
 - 1.8.2 Facility Drills/Exercises
 - 1.8.2.1 Qualified Individual Notification Drill Logs
 - 1.8.2.2 Spill Management Team Tabletop Exercise Logs
 - 1.8.3 Response Training
 - 1.8.3.1 Personnel Response Training Logs
 - 1.8.3.2 Discharge Prevention Meeting Logs
- 1.9 Diagrams
- 1.10 Security
- 2.0 Response Plan Cover Sheet
- 3.0 Acronyms
- 4.0 References

1.0 Model Facility-Specific Response Plan

(A) Owners or operators of facilities regulated under this part which pose a threat of substantial harm to the environment by discharging oil into or on navigable waters or adjoining shorelines are required to prepare and submit facility-specific response plans to EPA in accordance with the provisions in this appendix. This appendix further describes the required elements in § 112.20(h).

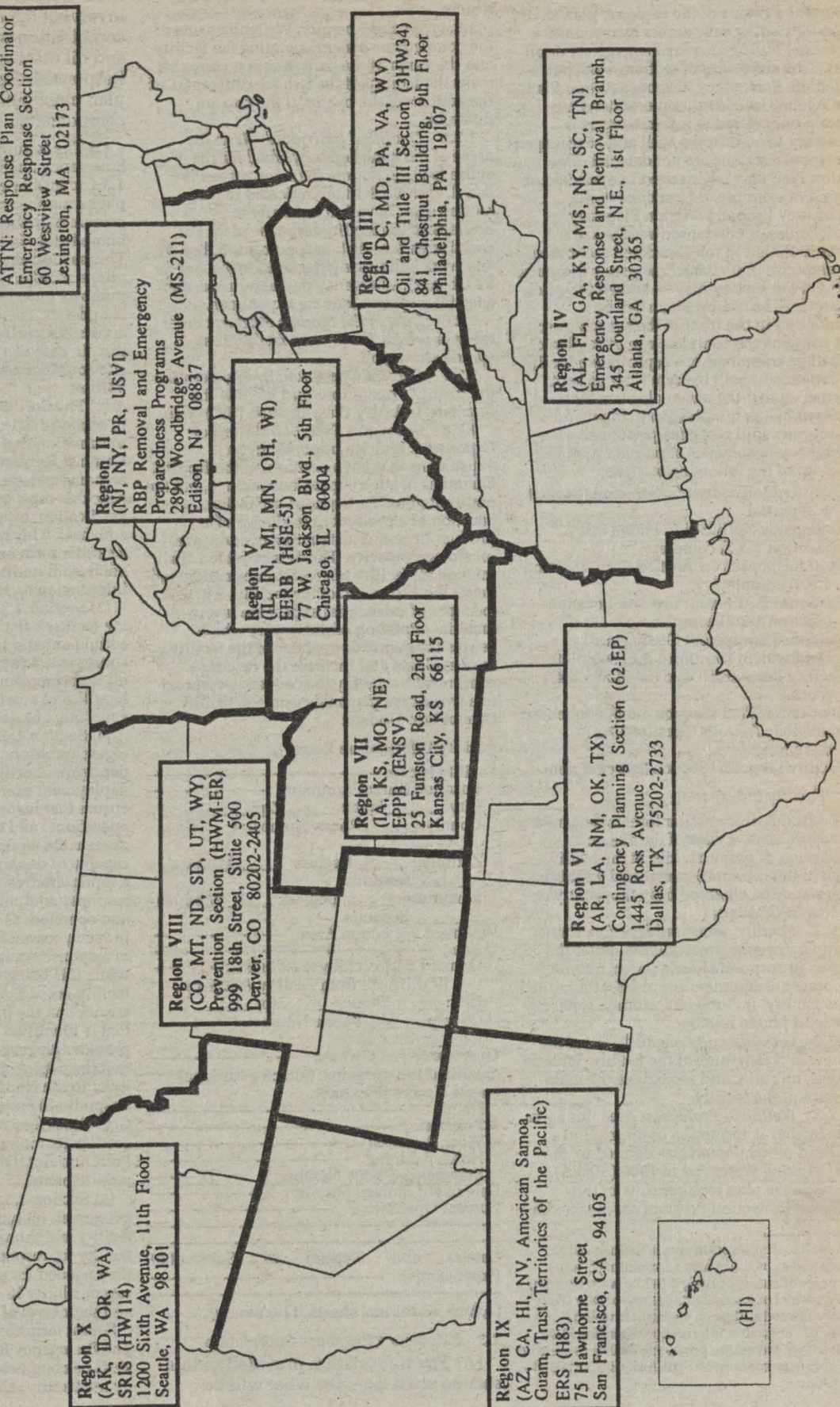
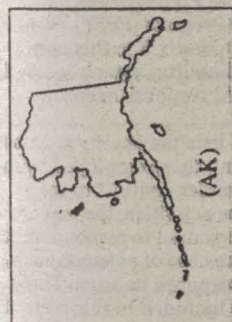
(B) Response plans must be sent to the appropriate EPA Regional office. Figure F-1 of this Appendix lists each EPA Regional office and the address where owners or operators must submit their response plans. Those facilities deemed by the Regional Administrator (RA) to pose a threat of significant and substantial harm to the environment will have their plans reviewed and approved by EPA. In certain cases, information required in the model response plan is similar to information currently maintained in the facility's Spill Prevention, Control, and Countermeasures (SPCC) Plan as required by 40 CFR 112.3. In these cases, owners or operators may reproduce the information and include a photocopy in the response plan.

(C) A complex may develop a single response plan with a set of core elements for all regulating agencies and separate sections for the non-transportation-related and transportation-related components, as described in § 112.20(h). Owners or operators of large facilities that handle, store, or transport oil at more than one geographically distinct location (e.g., oil storage areas at opposite ends of a single, continuous parcel of property) shall, as appropriate, develop separate sections of the response plan for each storage area.

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Figure F-1

EPA REGIONAL OFFICES FOR RESPONSE PLAN SUBMITTAL



1.1 Emergency Response Action Plan

Several sections of the response plan shall be co-located for easy access by response personnel during an actual emergency or oil spill. This collection of sections shall be called the Emergency Response Action Plan. The Agency intends that the Action Plan contain only as much information as is necessary to combat the spill and be arranged so response actions are not delayed. The Action Plan may be arranged in a number of ways. For example, the sections of the Emergency Response Action Plan may be photocopies or condensed versions of the forms included in the associated sections of the response plan. Each Emergency Response Action Plan section may be tabbed for quick reference. The Action Plan shall be maintained in the front of the same binder that contains the complete response plan or it shall be contained in a separate binder. In the latter case, both binders shall be kept together so that the entire plan can be accessed by the qualified individual and appropriate spill response personnel. The Emergency Response Action Plan shall be made up of the following sections:

1. Qualified Individual Information (Section 1.2) partial
2. Emergency Notification Phone List (Section 1.3.1) complete
3. Spill Response Notification Form (Section 1.3.1) complete
4. Response Equipment List and Location (Section 1.3.2) complete
5. Response Equipment Testing and Deployment (Section 1.3.3) complete
6. Facility Response Team (Section 1.3.4) partial
7. Evacuation Plan (Section 1.3.5) condensed
8. Immediate Actions (Section 1.7.1) complete
9. Facility Diagram (Section 1.9) complete

1.2 Facility Information

The facility information form is designed to provide an overview of the site and a description of past activities at the facility. Much of the information required by this section may be obtained from the facility's existing SPCC Plan.

1.2.1 Facility name and location: Enter facility name and street address. Enter the address of corporate headquarters only if corporate headquarters are physically located at the facility. Include city, county, state, zip code, and phone number.

1.2.2 Latitude and Longitude: Enter the latitude and longitude of the facility. Include degrees, minutes, and seconds of the main entrance of the facility.

1.2.3 Wellhead Protection Area: Indicate if the facility is located in or drains into a wellhead protection area as defined by the Safe Drinking Water Act of 1986 (SDWA).¹ The response plan requirements in the Wellhead Protection Program are outlined by

the State or Territory in which the facility resides.

1.2.4 Owner/operator: Write the name of the company or person operating the facility and the name of the person or company that owns the facility, if the two are different. List the address of the owner, if the two are different.

1.2.5 Qualified Individual: Write the name of the qualified individual for the entire facility. If more than one person is listed, each individual indicated in this section shall have full authority to implement the facility response plan. For each individual, list: name, position, home and work addresses (street addresses, not P.O. boxes), emergency phone number, and specific response training experience.

1.2.6 Date of Oil Storage Start-up: Enter the year which the present facility first started storing oil.

1.2.7 Current Operation: Briefly describe the facility's operations and include the Standard Industry Classification (SIC) code.

1.2.8 Dates and Type of Substantial Expansion: Include information on expansions that have occurred at the facility. Examples of such expansions include, but are not limited to: Throughput expansion, addition of a product line, change of a product line, and installation of additional oil storage capacity. The data provided shall include all facility historical information and detail the expansion of the facility. An example of substantial expansion is any material alteration of the facility which causes the owner or operator of the facility to re-evaluate and increase the response equipment necessary to adequately respond to a worst case discharge from the facility. Date of Last Update: _____

Facility Information Form

Facility Name: _____

Location (Street Address): _____

City: _____ State: _____ Zip: _____

County: _____ Phone Number: () _____

Latitude: _____ Degrees _____ Minutes _____ Seconds

Longitude: _____ Degrees _____ Minutes _____ Seconds

Wellhead Protection Area: _____

Owner: _____

Owner Location (Street Address): _____
(if different from Facility Address)

City: _____ State: _____ Zip: _____

County: _____ Phone Number: () _____

Operator (if not Owner): _____

Qualified Individual(s): (attach additional sheets if more than one)

Name: _____

Position: _____

Work Address: _____

Home Address: _____

Emergency Phone Number: () _____

Date of Oil Storage Start-up: _____

Current Operations: _____

Date(s) and Type(s) of Substantial Expansion(s): _____

(Attach additional sheets if necessary)

1.3 Emergency Response Information

(A) The information provided in this section shall describe what will be

needed in an actual emergency involving the discharge of oil or a combination of hazardous substances and oil discharge. The Emergency Response Information section of the plan must include the following components:

(1) The information provided in the Emergency Notification Phone List in section 1.3.1 identifies and prioritizes the names and phone numbers of the organizations and personnel that need to be notified immediately in the event of an emergency. This section shall include all the appropriate phone numbers for the facility. These numbers must be verified each time the plan is updated. The contact list must be accessible to all facility employees to ensure that, in case of a discharge, any employee on site could immediately notify the appropriate parties.

(2) The Spill Response Notification Form in section 1.3.1 creates a checklist of information that shall be provided to the National Response Center (NRC) and other response personnel. All information on this checklist must be known at the time of notification, or be in the process of being collected. This notification form is based on a similar form used by the NRC. Note: Do not delay spill notification to collect the information on the list.

(3) Section 1.3.2 provides a description of the facility's list of emergency response equipment and location of the response equipment. When appropriate, the amount of oil that emergency response equipment can handle and any limitations (e.g., launching sites) must be described.

(4) Section 1.3.3 provides information regarding response equipment tests and deployment drills. Response equipment deployment exercises shall be conducted to ensure that response equipment is operational and the personnel who would operate the equipment in a spill response are capable of deploying and operating it. Only a representative sample of each type of response equipment needs to be deployed and operated, as long as the remainder is properly maintained. If appropriate, testing of response equipment may be conducted while it is being deployed. Facilities without facility-owned response equipment must ensure that the oil spill removal organization that is identified in the response plan to provide this response equipment certifies that the deployment exercises have been met. Refer to the National Preparedness for Response Exercise Program (PREP) Guidelines (see Appendix E to this part, section 10, for availability), which satisfy Oil Pollution Act (OPA) response exercise requirements.

(5) Section 1.3.4 lists the facility response personnel, including those employed by the facility and those under contract to the facility for response activities, the amount of time needed for personnel to respond, their responsibility in the case of an emergency, and their level of response training. Three different forms are included in this section. The Emergency Response Personnel List shall be composed of all personnel employed by the facility whose duties involve

¹ A wellhead protection area is defined as the surface and subsurface area surrounding a water well or wellfield, supplying a public water system, through which contaminants are reasonably likely to move toward and reach such water well or wellfield. For further information regarding State and territory protection programs, facility owners or operators may contact the SDWA Hotline at 1-800-426-4791.

Were there Evacuations? _____ (Y/N)

Number Evacuated: _____

Was there any Damage? _____ (Y/N)

Damage in Dollars (approximate): _____

Medium Affected: _____

Description: _____

More Information about Medium: _____

Additional Information

Any information about the incident not recorded elsewhere in the report: _____

Caller Notifications

EPA? _____ (Y/N) USCG? _____ (Y/N)

State? _____ (Y/N)

Other? _____ (Y/N) Describe: _____

1.3.2 Response Equipment List

Date of Last Update: _____

Facility Response Equipment List

1. Skimmers/Pumps—Operational Status: _____

Type, Model, and Year: _____

Type Model Year

Number: _____

Capacity: _____ gal./min.

Daily Effective Recovery Rate: _____

Storage Location(s): _____

Date Fuel Last Changed: _____

2. Boom—Operational Status: _____

Type, Model, and Year: _____

Type Model Year

Number: _____

Size (length): _____ ft.

Containment Area: _____ sq. ft.

Storage Location: _____

3. Chemicals Stored (Dispersants listed on EPA's NCP Product Schedule)

Type	Amount	Date purchased	Treatment capacity	Storage location

Were appropriate procedures used to receive approval for use of dispersants in accordance with the NCP (40 CFR 300.910)

and the Area Contingency Plan (ACP), where applicable? _____ (Y/N).

Name and State of On-Scene Coordinator (OSC) authorizing use: _____

Date Authorized: _____

4. Dispersant Dispensing Equipment—Operational Status: _____

Type and year	Capacity	Storage location	Response time (minutes)

5. Sorbents—Operational Status: _____

Type and Year Purchased: _____

Amount: _____

Absorption Capacity (gal.): _____

Storage Location(s): _____

6. Hand Tools—Operational Status: _____

Type and year	Quantity	Storage location

7. Communication Equipment (include operating frequency and channel and/or cellular phone numbers)—Operational Status: _____

Type and year	Quantity	Storage location/number

8. Fire Fighting and Personnel Protective Equipment—Operational Status: _____

Type and year	Quantity	Storage location

9. Other (e.g., Heavy Equipment, Boats and Motors)—Operational Status: _____

Type and year	Quantity	Storage location

1.3.3 Response Equipment Testing/Deployment

Date of Last Update: _____

Response Equipment Testing and Deployment Drill Log

Last Inspection or Response Equipment Test Date: _____

Inspection Frequency: _____

Last Deployment Drill Date: _____

Deployment Frequency: _____

Oil Spill Removal Organization Certification (if applicable): _____

1.3.4 Personnel

Date of Last Update: _____

EMERGENCY RESPONSE PERSONNEL

Company Personnel

Name	Phone ¹	Response time	Responsibility during response action	Response training type/date
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				

¹ Phone number to be used when person is not on-site.

EMERGENCY RESPONSE CONTRACTORS

Date of Last Update: _____

Contractor	Phone	Response time	Contract responsibility ¹
1.			
2.			
3.			
4.			

¹ Include evidence of contracts/agreements with response contractors to ensure the availability of personnel and response equipment.

FACILITY RESPONSE TEAM

Date of Last Update: _____

Team member	Response time (minutes)	Phone or pager number (day/evening)
Qualified Individual:		/
		/
		/
		/
		/
		/

1.4.2 Vulnerability Analysis

The vulnerability analysis shall address the potential effects (i.e., to human health, property, or the environment) of an oil spill. Attachment C-III to Appendix C to this part provides a method that owners or operators shall use to determine appropriate distances from the facility to fish and wildlife and sensitive environments. Owners or operators can use a comparable formula that is considered acceptable by the RA. If a comparable formula is used, documentation of the reliability and analytical soundness of the formula must be attached to the response plan cover sheet. This analysis must be prepared for each facility and, as appropriate, must discuss the vulnerability of:

- (1) Water intakes (drinking, cooling, or other);
- (2) Schools;
- (3) Medical facilities;
- (4) Residential areas;
- (5) Businesses;
- (6) Wetlands or other sensitive environments;²
- (7) Fish and wildlife;
- (8) Lakes and streams;
- (9) Endangered flora and fauna;
- (10) Recreational areas;
- (11) Transportation routes (air, land, and water);
- (12) Utilities; and
- (13) Other areas of economic importance (e.g., beaches, marinas) including terrestrially sensitive environments, aquatic environments, and unique habitats.

1.4.3 Analysis of the Potential for an Oil Spill

Each owner or operator shall analyze the probability of a spill occurring at the facility. This analysis shall incorporate factors such as oil spill history, horizontal range of a potential spill, and vulnerability to natural disaster, and shall, as appropriate, incorporate other factors such as tank age. This analysis will provide information for developing discharge scenarios for a worst case discharge and small and medium discharges and aid in the development of techniques to reduce the size and frequency of spills. The owner or operator may need to research the age of the tanks and the oil spill history at the facility.

² Refer to the DOC/NOAA "Guidance for Facility and Vessel Response Plans: Fish and Wildlife and Sensitive Environments" (See appendix E to this part, section 10, for availability).

1.4.4 Facility Reportable Oil Spill History

Briefly describe the facility's reportable oil spill³ history for the entire life of the facility to the extent that such information is reasonably identifiable, including:

- (1) Date of discharge(s);
- (2) List of discharge causes;
- (3) Material(s) discharged;
- (4) Amount discharged in gallons;
- (5) Amount of discharge that reached navigable waters, if applicable;
- (6) Effectiveness and capacity of secondary containment;
- (7) Clean-up actions taken;
- (8) Steps taken to reduce possibility of recurrence;
- (9) Total oil storage capacity of the tank(s) or impoundment(s) from which the material discharged;
- (10) Enforcement actions;
- (11) Effectiveness of monitoring equipment; and
- (12) Description(s) of how each oil spill was detected.

The information solicited in this section may be similar to requirements in 40 CFR 112.4(a). Any duplicate information required by § 112.4(a) may be photocopied and inserted.

1.5 Discharge Scenarios

In this section, the owner or operator is required to provide a description of the facility's worst case discharge, as well as a small and medium spill, as appropriate. A multi-level planning approach has been chosen because the response actions to a spill (i.e., necessary response equipment, products, and personnel) are dependent on the magnitude of the spill. Planning for lesser discharges is necessary because the nature of the response may be qualitatively different depending on the quantity of the discharge. The facility owner or operator shall discuss the potential direction of the spill pathway.

1.5.1 Small and Medium Discharges

1.5.1.1 To address multi-level planning requirements, the owner or operator must consider types of facility-specific spill scenarios that may contribute to a small or medium spill. The scenarios shall account for all the operations that take place at the facility, including but not limited to:

- (1) Loading and unloading of surface transportation;

³ As described in 40 CFR part 110, reportable oil spills are those that: (a) violate applicable water quality standards, or (b) cause a film or sheen upon or discoloration of the surface of the water or adjoining shorelines or cause a sludge or emulsion to be deposited beneath the surface of the water or upon adjoining shorelines.

- (2) Facility maintenance;
- (3) Facility piping;
- (4) Pumping stations and sumps;
- (5) Oil storage tanks;
- (6) Vehicle refueling; and
- (7) Age and condition of facility and components.

1.5.1.2 The scenarios shall also consider factors that affect the response efforts required by the facility. These include but are not limited to:

- (1) Size of the spill;
- (2) Proximity to downgradient wells, waterways, and drinking water intakes;
- (3) Proximity to fish and wildlife and sensitive environments;
- (4) Likelihood that the discharge will travel offsite (i.e., topography, drainage);
- (5) Location of the material spilled (i.e., on a concrete pad or directly on the soil);
- (6) Material discharged;
- (7) Weather or aquatic conditions (i.e., river flow);
- (8) Available remediation equipment;
- (9) Probability of a chain reaction of failures; and
- (10) Direction of spill pathway.

1.5.2 Worst Case Discharge

1.5.2.1 In this section, the owner or operator must identify the worst case discharge volume at the facility. Worksheets for production and non-production facility owners or operators to use when calculating worst case discharge are presented in Appendix D to this part. When planning for the worst case discharge response, all of the aforementioned factors listed in the small and medium discharge section of the response plan shall be addressed.

1.5.2.2 For onshore storage facilities and production facilities, permanently manifolded oil storage tanks are defined as tanks that are designed, installed, and/or operated in such a manner that the multiple tanks function as one storage unit (i.e., multiple tank volumes are equalized). In this section of the response plan, owners or operators must provide evidence that oil storage tanks with common piping or piping systems are not operated as one unit. If such evidence is provided and is acceptable to the RA, the worst case discharge volume shall be based on the combined oil storage capacity of all manifold tanks or the oil storage capacity of the largest single oil storage tank within the secondary containment area, whichever is greater. For permanently manifolded oil storage tanks that function as one storage unit, the worst case discharge shall be based on the combined oil storage capacity of all manifolded tanks or the oil storage capacity of the largest single tank within a secondary

containment area, whichever is greater. For purposes of the worst case discharge calculation, permanently manifolded oil storage tanks that are separated by internal divisions for each tank are considered to be single tanks and individual manifolded tank volumes are not combined.

1.6 Discharge Detection Systems

In this section, the facility owner or operator shall provide a detailed description of the procedures and equipment used to detect discharges. A section on spill detection by personnel and a discussion of automated spill detection, if applicable, shall be included for both regular operations and after hours operations. In addition, the facility owner or operator shall discuss how the reliability of any automated system will be checked and how frequently the system will be inspected.

1.6.1 Discharge Detection by Personnel

In this section, facility owners or operators shall describe the procedures and personnel that will detect any spill or uncontrolled discharge of oil or release of a hazardous substance. A thorough discussion of facility inspections must be included. In addition, a description of initial response actions shall be addressed. This section shall reference section 1.3.1 of the response plan for emergency response information.

1.6.2 Automated Discharge Detection

In this section, facility owners or operators must describe any automated spill detection equipment that the facility has in place. This section shall include a discussion of overflow alarms, secondary containment sensors, etc. A discussion of the plans to verify an automated alarm and the actions to be taken once verified must also be included.

1.7 Plan Implementation

In this section, facility owners or operators must explain in detail how to implement the facility's emergency response plan by describing response actions to be carried out under the plan to ensure the safety of the facility and to mitigate or prevent discharges described in section 1.5 of the response plan. This section shall include the identification of response resources for small, medium, and worst case spills; disposal plans; and containment and drainage planning. A list of those personnel who would be involved in the cleanup shall be identified. Procedures that the facility will use, where appropriate or necessary, to update their plan after an oil spill event and the time frame to update the plan must be described.

1.7.1 Response Resources for Small, Medium, and Worst Case Spills

1.7.1.1 Once the spill scenarios have been identified in section 1.5 of the response plan, the facility owner or operator shall identify and describe implementation of the response actions. The facility owner or operator shall demonstrate accessibility to the proper response personnel and equipment to effectively respond to all of the identified spill scenarios. The determination and demonstration of adequate response capability are presented in Appendix E to this part. In addition, steps to expedite the cleanup of oil spills must be discussed. At a minimum, the following items must be addressed:

- (1) Emergency plans for spill response;
- (2) Additional response training;
- (3) Additional contracted help;
- (4) Access to additional response equipment/experts; and
- (5) Ability to implement the plan including response training and practice drills.

1.7.1.2A recommended form detailing immediate actions follows.

Oil Spill Response—Immediate Actions

1. Stop the product flow.	Act quickly to secure pumps, close valves, etc.
2. Warn personnel	Enforce safety and security measures.
3. Shut off ignition sources.	Motors, electrical circuits, open flames, etc.
4. Initiate containment	Around the tank and/or in the water with oil boom.
5. Notify NRC	1-800-424-8802
6. Notify OSC	
7. Notify, as appropriate	

Source: FOSS, Oil Spill Response—Emergency Procedures, Revised December 3, 1992.

1.7.2 Disposal Plans

1.7.2.1 Facility owners or operators must describe how and where the facility intends to recover, reuse, decontaminate, or dispose of materials after a discharge has taken place. The appropriate permits required to transport or dispose of recovered materials according to local, State, and Federal requirements must be addressed. Materials that must be accounted for in the disposal plan, as appropriate, include:

- (1) Recovered product;
- (2) Contaminated soil;
- (3) Contaminated equipment and materials, including drums, tank parts, valves, and shovels;
- (4) Personnel protective equipment;
- (5) Decontamination solutions;
- (6) Adsorbents; and
- (7) Spent chemicals.

1.7.2.2 These plans must be prepared in accordance with Federal (e.g., the Resource Conservation and Recovery Act [RCRA]), State, and local regulations, where applicable. A copy of the disposal plans from the facility's SPCC Plan may be inserted with this section, including any diagrams in those plans.

Material	Disposal facility	Location	RCRA permit/manifest
1.			
2.			
3.			
4.			

1.7.3 Containment and Drainage Planning

A proper plan to contain and control a spill through drainage may limit the threat of harm to human health and the environment. This section shall describe how to contain and control a spill through drainage, including:

- (1) The available volume of containment (use the information presented in section 1.4.1 of the response plan);
- (2) The route of drainage from oil storage and transfer areas;
- (3) The construction materials used in drainage troughs;

- (4) The type and number of valves and separators used in the drainage system;
- (5) Sump pump capacities;
- (6) The containment capacity of weirs and booms that might be used and their location (see section 1.3.2 of this appendix); and
- (7) Other cleanup materials.

[illegible]

1.8.1.2 Response Equipment Inspection

Using the Emergency Response Equipment List provided in section 1.3.2 of the response plan, describe each type of response equipment, checking for the following:

Response Equipment Checklist

1. Inventory (item and quantity);
2. Storage location;
3. Accessibility (time to access and respond);
4. Operational status/condition;

5. Actual use/testing (last test date and frequency of testing); and
6. Shelf life (present age, expected replacement date).

Please note any discrepancies between this list and the available response equipment.

RESPONSE EQUIPMENT INSPECTION LOG

[Use section 1.3.2 of the response plan as a checklist]

[illegible]

1.8.1.3 Secondary Containment Inspection

Inspect the secondary containment (as described in sections 1.4.1 and 1.7.2 of the response plan), checking the following:

Secondary Containment Checklist

1. Dike or berm system.
 - A. Level of precipitation in dike/available capacity;
 - B. Operational status of drainage valves;
 - C. Dike or berm permeability;
 - D. Debris;
 - E. Erosion;
 - F. Permeability of the earthen floor of diked area; and
 - G. Location/status of pipes, inlets, drainage beneath tanks, etc.
2. Secondary containment
 - A. Cracks;
 - B. Discoloration;
 - C. Presence of spilled or leaked material (standing liquid);
 - D. Corrosion; and

- E. Valve conditions.
- 3. Retention and drainage ponds
 - A. Erosion;
 - B. Available capacity;
 - C. Presence of spilled or leaked material;
 - D. Debris; and
 - E. Stressed vegetation.

During inspection, make note of discrepancies in any of the above mentioned items, and report them immediately to the proper facility personnel. Similar requirements exist in 40 CFR 112.7(e). Duplicate information from the SPCC Plan may be photocopied and inserted in this section.

1.8.2 Facility Drills/Exercises

(A) CWA section 311(j)(5), as amended by OPA, requires the response plan to contain a description of facility drills/exercises. According to 40 CFR 112.21(c), the facility owner or operator shall develop a program of facility response drills/exercises, including evaluation procedures. Following the PREP

guidelines (see Appendix E to this part, section 10, for availability) would satisfy a facility's requirements for drills/exercises under this part. Alternately, under § 112.21(c), a facility owner or operator may develop a program that is not based on the PREP guidelines. Such a program is subject to approval by the Regional Administrator based on the description of the program provided in the response plan.

(B) The PREP Guidelines specify that the facility conduct internal and external drills/exercises. The internal exercises include: qualified individual notification drills, spill management team tabletop exercises, equipment deployment exercises, and unannounced exercises. External exercises include Area Exercises. Credit for an Area or Facility-specific Exercise will be given to the facility for an actual response to a spill in the area if the plan was utilized for response to the spill and the objectives of the Exercise were met and were properly evaluated, documented and self-certified.

1.9 Diagrams

The facility-specific response plan shall include the following diagrams. Additional diagrams that would aid in the development of response plan sections may also be included.

- (1) The Site Plan Diagram shall, as appropriate, include and identify:
 - (A) the entire facility to scale;
 - (B) above and below ground bulk oil storage tanks;
 - (C) the contents and capacities of bulk oil storage tanks;
 - (D) the contents and capacity of drum oil storage areas;
 - (E) the contents and capacities of surface impoundments;
 - (F) process buildings;
 - (G) transfer areas;
 - (H) secondary containment systems (location and capacity);
 - (I) structures where hazardous materials are stored or handled, including materials stored and capacity of storage;
 - (J) location of communication and emergency response equipment;
 - (K) location of electrical equipment which contains oil; and
 - (L) for complexes only, the interface(s) (i.e., valve or component) between the portion of the facility regulated by EPA and the portion(s) regulated by other Agencies. In most cases, this interface is defined as the last valve inside secondary containment before piping leaves the secondary containment area to connect to the transportation-related portion of the facility (i.e., the structure used or intended to be used to transfer oil to or from a vessel or pipeline). In the absence of secondary containment, this interface is the valve manifold adjacent to the tank nearest the transfer structure as described above. The interface may be defined differently at a specific facility if agreed to by the RA and the appropriate Federal official.
- (2) The Site Drainage Plan Diagram shall, as appropriate, include:
 - (A) major sanitary and storm sewers, manholes, and drains;
 - (B) weirs and shut-off valves;
 - (C) surface water receiving streams;
 - (D) fire fighting water sources;
 - (E) other utilities;
 - (F) response personnel ingress and egress;
 - (G) response equipment transportation routes; and
 - (H) direction of spill flow from discharge points.
- (3) The Site Evacuation Plan Diagram shall, as appropriate, include:
 - (A) site plan diagram with evacuation route(s); and
 - (B) location of evacuation regrouping areas.

1.10 Security

According to 40 CFR 112.7(e)(9), facilities are required to maintain a certain level of security, as appropriate. In this section, a description of the facility security shall be provided and include, as appropriate:

- (1) emergency cut-off locations (automatic or manual valves);
- (2) enclosures (e.g., fencing, etc.);
- (3) guards and their duties, day and night;

- (4) lighting;
- (5) valve and pump locks; and
- (6) pipeline connection caps.

The SPCC Plan contains similar information. Duplicate information may be photocopied and inserted in this section.

2.0 Response Plan Cover Sheet

A three-page form has been developed to be completed and submitted to the RA by owners or operators who are required to prepare and submit a facility-specific response plan. The cover sheet (Attachment F-1) must accompany the response plan to provide the Agency with basic information concerning the facility. This section will describe the Response Plan Cover Sheet and provide instructions for its completion.

2.1 Page One—General Information

Owner/Operator of Facility: Enter the name of the owner of the facility (if the owner is the operator). Enter the operator of the facility if otherwise. If the owner/operator of the facility is a corporation, enter the name of the facility's principal corporate executive. Enter as much of the name as will fit in each section.

- (1) **Facility Name:** Enter the proper name of the facility.
- (2) **Facility Address:** Enter the street address, city, State, and zip code.
- (3) **Facility Phone Number:** Enter the phone number of the facility.
- (4) **Latitude and Longitude:** Enter the facility latitude and longitude in degrees, minutes, and seconds.
- (5) **Dun and Bradstreet Number:** Enter the facility's Dun and Bradstreet number if available (this information may be obtained from public library resources).
- (6) **Standard Industrial Classification (SIC) Code:** Enter the facility's SIC code as determined by the Office of Management and Budget (this information may be obtained from public library resources).
- (7) **Largest Oil Storage Tank Capacity:** Enter the capacity in GALLONS of the largest aboveground oil storage tank at the facility.
- (8) **Maximum Oil Storage Capacity:** Enter the total maximum capacity in GALLONS of all aboveground oil storage tanks at the facility.
- (9) **Number of Oil Storage Tanks:** Enter the number of all aboveground oil storage tanks at the facility.
- (10) **Worst Case Discharge Amount:** Using information from the worksheets in Appendix D, enter the amount of the worst case discharge in GALLONS.
- (11) **Facility Distance to Navigable Waters:** Mark the appropriate line for the nearest distance between an opportunity for discharge (i.e., oil storage tank, piping, or flowline) and a navigable water.

2.2 Page Two—Applicability of Substantial Harm Criteria

Using the flowchart provided in Attachment C-I to Appendix C to this part, mark the appropriate answer to each question. Explanations of referenced terms can be found in Appendix C to this part. If a comparable formula to the ones described in Attachment C-III to Appendix C to this part is used to calculate the planning

distance, documentation of the reliability and analytical soundness of the formula must be attached to the response plan cover sheet.

2.3 Page Three—Certification

Complete this block after all other questions have been answered.

3.0 Acronyms

ACP: Area Contingency Plan
 ASTM: American Society of Testing Materials
 bbls: Barrels
 bpd: Barrels per Day
 bph: Barrels per Hour
 CHRIS: Chemical Hazards Response Information System
 CWA: Clean Water Act
 DOI: Department of Interior
 DOC: Department of Commerce
 DOT: Department of Transportation
 EPA: Environmental Protection Agency
 FEMA: Federal Emergency Management Agency
 FR: Federal Register
 gal: Gallons
 gpm: Gallons per Minute
 HAZMAT: Hazardous Materials
 LEPC: Local Emergency Planning Committee
 MMS: Minerals Management Service (part of DOI)
 NCP: National Oil and Hazardous Substances Pollution Contingency Plan
 NOAA: National Oceanic and Atmospheric Administration (part of DOC)
 NRC: National Response Center
 NRT: National Response Team
 OPA: Oil Pollution Act of 1990
 OSC: On-Scene Coordinator
 PREP: National Preparedness for Response Exercise Program
 RA: Regional Administrator
 RCRA: Resource Conservation and Recovery Act
 RRC: Regional Response Centers
 RRT: Regional Response Team
 RSPA: Research and Special Programs Administration
 SARA: Superfund Amendments and Reauthorization Act
 SERC: State Emergency Response Commission
 SDWA: Safe Drinking Water Act of 1986
 SI: Surface Impoundment
 SIC: Standard Industrial Classification
 SPCC: Spill Prevention, Control, and Countermeasures
 USCG: United States Coast Guard

4.0 References

CONCAWE. 1982. Methodologies for Hazard Analysis and Risk Assessment in the Petroleum Refining and Storage Industry. Prepared by CONCAWE's Risk Assessment Ad-hoc Group.
 U.S. Department of Housing and Urban Development. 1987. Siting of HUD-Assisted Projects Near Hazardous Facilities: Acceptable Separation Distances from Explosive and Flammable Hazards. Prepared by the Office of Environment and Energy, Environmental Planning Division, Department of Housing and Urban Development. Washington, DC.
 U.S. DOT, FEMA and U.S. EPA. Handbook of Chemical Hazard Analysis Procedures.

U.S. DOT, FEMA and U.S. EPA. Technical Guidance for Hazards Analysis: Emergency Planning for Extremely Hazardous Substances.

The National Response Team. 1987. Hazardous Materials Emergency Planning Guide. Washington, DC.

The National Response Team. 1990. Oil Spill Contingency Planning, National Status: A Report to the President. Washington, DC. U.S. Government Printing Office.

Offshore Inspection and Enforcement Division. 1988. Minerals Management Service, Offshore Inspection Program: National Potential Incident of Noncompliance (PINC) List. Reston, VA.

Attachments to Appendix F

Attachment F-1—Response Plan Cover Sheet

This cover sheet will provide EPA with basic information concerning the facility. It must accompany a submitted facility response plan. Explanations and detailed instructions can be found in Appendix F. Please type or write legibly in blue or black ink. Public reporting burden for the collection of this information is estimated to vary from 1 hour to 270 hours per response in the first year, with an average of 5 hours per response. This estimate includes time for reviewing instructions, searching existing data sources, gathering the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate of this information, including suggestions for reducing this burden to: Chief, Information Policy Branch, PM-223, U.S. Environmental Protection Agency, 401 M St., SW., Washington, D.C. 20460; and to the Office of Information and Regulatory Affairs, Office of Management and Budget, Washington D.C. 20503.

General Information

Owner/Operator of Facility:

Facility Name: _____
Facility Address (street address or route): _____

City, State, and U.S. Zip Code: _____

Facility Phone No.: _____
Latitude (Degrees: North): _____

degrees, minutes, seconds _____
Dun & Bradstreet Number: ¹ _____

Largest Aboveground Oil Storage Tank Capacity (Gallons): _____

Number of Aboveground Oil Storage Tanks: _____

Longitude (Degrees: West): _____

degrees, minutes, seconds _____
Standard Industrial Classification (SIC) Code: ¹ _____

Maximum Oil Storage Capacity (Gallons): _____
Worst Case Oil Discharge Amount (Gallons): _____
Facility Distance to Navigable Water. Mark the appropriate line.
0-1/4 mile _____ 1/4-1/2 mile _____ 1/2-1 mile _____
_____ >1 mile _____

Applicability of Substantial Harm Criteria

Does the facility transfer oil over-water ² to or from vessels and does the facility have a total oil storage capacity greater than or equal to 42,000 gallons?

Yes _____
No _____

Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and, within any storage area, does the facility lack secondary containment ² that is sufficiently large to contain the capacity of the largest aboveground oil storage tank plus sufficient freeboard to allow for precipitation?

Yes _____
No _____

Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and is the facility located at a

¹ These numbers may be obtained from public library resources.

² Explanations of the above-referenced terms can be found in Appendix C to this part. If a comparable formula to the ones contained in Attachment C-III is used to establish the appropriate distance to fish and wildlife and sensitive environments or public drinking water intakes, documentation of the reliability and analytical soundness of the formula must be attached to this form.

distance ² (as calculated using the appropriate formula in Appendix C or a comparable formula) such that a discharge from the facility could cause injury to fish and wildlife and sensitive environments? ³

Yes _____
No _____
Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and is the facility located at a distance ² (as calculated using the appropriate formula in Appendix C or a comparable formula) such that a discharge from the facility would shut down a public drinking water intake? ²

Yes _____
No _____
Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and has the facility experienced a reportable oil spill ² in an amount greater than or equal to 10,000 gallons within the last 5 years?

Yes _____
No _____

Certification

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document, and that based on my inquiry of those individuals responsible for obtaining information, I believe that the submitted information is true, accurate, and complete.

Signature: _____
Name (Please type or print): _____

Title: _____
Date: _____

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BILLING CODE 4560-50-P

³ For further description of fish and wildlife and sensitive environments, see Appendices I, II, and III to DOC/NOAA's "Guidance for Facility and Vessel Response Plans: Fish and Wildlife and Sensitive Environments" (see Appendix E to this part, section 10, for availability) and the applicable ACP.